Annex 1

Constitution of the Oriental Republic of Uruguay

SECTION I
OF THE NATION AND ITS SOVEREIGNTY

CHAPTER I
Article 1.
The Oriental Republic of Uruguay is the political association of all the inhabitants within its territory.

Article 2.
It is and will forever be free and independent of all foreign power.

Article 3.
It will never be the patrimony of any person or family.

CHAPTER II
Article 4.
Sovereignty in all its fullness exists radically in the Nation, which has the exclusive right to establish its laws, in the manner that will be expressed below.

CHAPTER III
Article 5.
All religious cults are free in Uruguay. The State does not support any religion. It recognizes to the Catholic Church the dominion of all the temples that have been totally or partially built with funds from the National Treasury, with the exception of chapels destined for the service of asylums, hospitals, prisons or other public establishments. It also declares exempt from all kinds of taxes temples consecrated to the worship of the various religions.

CHAPTER IV
Article 6.
In the international treaties concluded by the Republic, it shall propose the clause that all differences arising between the contracting parties, shall be decided by arbitration or other peaceful means.
The Republic shall seek the social and economic integration of the Latin American States, especially as regards the common defense of their products and raw materials. Likewise, the Republic shall strive for the effective complementation of its public services.

SECTION II
RIGHTS, DUTIES AND GUARANTEES

CHAPTER I

State and the law shall establish what it deems appropriate for its defense.

Article 35.
No one shall be obliged to provide aid, of whatever kind, for the armies, nor to open his house for the lodging of soldiers, except by
order of the civil magistrate according to the law, and shall receive from the Republic the compensation for the damage that in such cases is inflicted on him.

Article 36.
Any person may engage in work, cultivation, industry, trade, commerce, profession or any other lawful activity, except for the limitations of interest
established by law.

Article 37.
It is free for any person to enter the territory of the Republic, to remain in it and to leave it with his or her property, observing the laws and except for the following damages to third parties.
Immigration shall be regulated by law, but in no case shall the immigrant suffer from physical, mental or moral defects that may be detrimental to society.

Article 38.
The right to peaceful and unarmed assembly is guaranteed. The exercise of this right may not be disregarded by any authority of the
Republic but by virtue of a law, and only insofar as it is opposed to public health, safety and order.

Article 39.
All persons have the right to associate, whatever their object, provided that they do not constitute an unlawful association.
declared by law.

CHAPTER II
Article 40.
The family is the foundation of our society. The State shall watch over its moral and material stability, for the best formation of children within the family.
society.

Article 41.
The care and education of children so that they reach their full physical, intellectual and social capacity is a duty and a right of parents.
parents. Those who have numerous offspring are entitled to compensatory allowances, whenever they need them.
The law shall provide for the necessary measures to ensure that children and youth are protected against corporal, intellectual or moral abandonment of their parents or guardians, as well as against exploitation and abuse.

Article 42.
Parents have the same duties towards children born out of wedlock as they have towards children born in wedlock.
Maternity, regardless of a woman's condition or status, is entitled to the protection of society and to its assistance in case of
homelessness.

Article 43.
The law shall ensure that child delinquency is subject to a special regime in which women shall be involved.

Article 44.
The State shall legislate in all matters relating to public health and hygiene, striving for the physical, moral and social improvement of
all the inhabitants of the country.
All inhabitants have the duty to take care of their health, as well as to assist themselves in case of illness. The State shall provide free of charge
means of prevention and assistance only to those who are indigent or lack sufficient resources.

Article 45.
Every inhabitant of the Republic has the right to enjoy decent housing. The law shall tend to ensure hygienic and economical housing,
facilitating their acquisition and stimulating private capital investment for this purpose.

Article 46.
The State shall grant asylum to indigent persons or persons lacking sufficient resources who, because of chronic physical or mental handicap, are in a state of chronic physical or mental disability.
disqualified for work. The state shall combat social vices by means of the law and international conventions.

Article 47.
The protection of the environment is of general interest. Persons shall refrain from any act that causes serious depredation, destruction or pollution of the environment. The law shall regulate this provision and may provide for penalties for transgressors.

Article 48.
Inheritance rights are guaranteed within the limits established by law. The straight ascending and descending line will be treated as
preferential tax laws.

Article 49.
The "family property", its constitution, conservation, enjoyment and transmission, will be the object of special protective legislation.

Article 50.

The State shall guide the Republic's foreign trade by protecting the productive activities that are destined for export or that replace
imported goods. The law shall promote investments for this purpose, and shall preferably channel public savings for this purpose.
Any trustified commercial or industrial organization shall be under the control of the State.
Likewise, the State shall promote decentralization policies in order to foster regional development and general welfare.

Article 51.
The State or the Departmental Governments, as the case may be, shall make the establishment and validity of the tariffs for public services provided by concessionary companies conditional upon their approval.
The concessions referred to in this article may not be granted in perpetuity in any case.

Article 52.
Usury is prohibited. It is of public order the law that sets a maximum limit to the interest on loans. This law shall determine the penalty to be applied to those who violators.
No one shall be deprived of his liberty for debt.

Article 53.
The work is under the special protection of the law.
Every inhabitant of the Republic, without prejudice to his freedom, has the duty to apply his intellectual or bodily energies in a way that benefits the community, which shall endeavor to offer, preferably to its citizens, the possibility of earning his livelihood through the development of an economic activity.

Article 54.
The law must recognize that whoever is in a work or service relationship, as a worker or employee, has the independence of his or her moral conscience and the right to be free of any kind of discrimination.
The following are the most important aspects of the labor laws: civic rights; fair remuneration; limitation of the workday; weekly rest; and physical and moral hygiene.
The work of women and minors under eighteen years of age shall be specially regulated and limited.

Article 55.
The law shall regulate the impartial and equitable distribution of work.

Article 56.
All companies whose characteristics determine the permanence of the personnel in the respective establishment shall be obliged to provide them with adequate food and lodging, under the conditions to be established by law. Article

57.

The law shall promote the organization of trade unions, granting them franchises and issuing regulations to recognize them as legal entities.
It shall also promote the creation of conciliation and arbitration tribunals. Strike shall be declared a trade union right. On this basis, its exercise and effectiveness shall be regulated.

Article 58.
Civil servants are at the service of the Nation and not of a political faction. In working places and during working hours, any activity is forbidden.
The use of the company's name and logo for the purpose of proselytizing of any kind is considered illegal.
Groups may not be formed for proselytizing purposes using the names of public agencies or invoking the link that the function determines among its members.

Article 59.
The law shall establish the Civil Servant Statute on the fundamental basis that the civil servant exists for the function and not the function for the civil servant.
official.
Its precepts shall apply to dependent employees:
A) Of the Executive Branch, with the exception of the military, police and diplomats, who shall be governed by special laws.
B) Of the Judiciary and the Court of Administrative Disputes, except for positions in the Judiciary.
C) From the Court of Auditors.
D) Of the Electoral Court and its dependencies, without prejudice to the rules intended to ensure the control of political parties.
E) Of the Decentralized Services, without prejudice to the provisions of special laws in this respect, in view of the different nature of their duties.

Article 60.
The law shall create the Civil Service of the Central Administration, Autonomous Entities and Decentralized Services, which shall have the duties set forth therein.
to ensure efficient management.
An administrative career is hereby established for budgeted civil servants of the Central Administration, who are declared irremovable, without prejudice to as provided by law by an absolute majority of votes of the total number of members of each Chamber and the provisions of paragraph 4°.
of this article.
They may only be removed from office in accordance with the rules set forth in this Constitution.
The administrative career does not include officials of a political nature or those in positions of particular trust, who have been established as such by
The members of each Chamber shall be appointed and may be dismissed by the President of the House of Representatives, who shall be appointed and may be dismissed by the President of the House of Representatives.

corresponding administrative body.

Article 61.
For career civil servants, the Staff Regulations shall establish the conditions for entry into the Administration, regulate the right to tenure, promotion, weekly rest, annual and sick leave, the conditions for suspension or dismissal, and the conditions for the termination of employment.
their functional obligations and the administrative appeals against the resolutions that affect them, without prejudice to the provisions of the
Section XVII.

Article 62.
The Departmental Governments shall enact the Statute for their officers, in accordance with the rules set forth in the preceding articles, and
Until such time as they do so, the provisions established by law for public officials shall apply to them.
For the purpose of declaring the removability of its officials and qualifying positions of a political nature or positions of special trust, the following shall be required
three fifths of the total number of members of the Departmental Board.

Article 63.
The Autonomous Commercial and Industrial Entities shall design, within one year of the promulgation of this Constitution, the Statute for the
The report shall be submitted to the Executive Branch for its approval.
This Statute shall contain the provisions conducive to ensure the normal operation of the services and the rules of guarantee established in
The above articles for officers, insofar as it is compatible with the specific purposes of each Autonomous Entity.

Article 64.
The law, by a two-thirds vote of the total number of members of each House, may establish special rules which by reason of their generality or nature
are applicable to the officials of all the Departmental Governments and of all the Autonomous Entities, or of some of them, as the case may be.

Article 65.
The law may authorize the creation of commissions in the Autonomous Entities to represent the respective personnel, for the purpose of
collaboration with the Directors for the compliance with the rules of the Bylaws, the study of the budgetary order, the organization of the
services, regulation of work and application of disciplinary measures. In public services administered directly or by concessionaires, the law may provide for the formation of bodies with jurisdiction to hear and determine
in the case of misunderstandings between the authorities of the services and their employees and workers, as well as the means and procedures that may be used by the

public authority to maintain continuity of services.

Article 66.
No parliamentary or administrative investigation into irregularities, omissions or offenses shall be considered concluded as long as the accused official has not been able to present his or her defense.

Article 67.
General pensions and social insurance shall be organized in such a way as to guarantee to all workers, employers, employees and laborers, pensions and social insurance.
and subsidies in the event of accidents, illness, disability, forced unemployment, etc.; and to their families, in the event of death, the corresponding pension. The old-age pension is a right for those who reach the limit of the productive age, after a long period of service.
The person must remain in the country and lacks the resources to meet his or her vital needs.

Article 68.
Freedom of education is guaranteed.
The law shall regulate the intervention of the State for the sole purpose of maintaining public hygiene, morality, safety and order.

Every parent or guardian has the right to choose, for the education of his or her wards, the teachers or institutions of his or her choice.

Article 69.
Private educational and cultural institutions of the same nature shall be exempted from national and municipal taxes, such as subsidy for its services.

Article 70.
Primary education and secondary, agricultural or industrial education are compulsory. The State shall promote the development of scientific research and technical education.
The law shall provide for the effectiveness of these provisions.

Article 71.
The free official primary, secondary, higher, industrial and artistic education, as well as physical education, is hereby declared to be of social utility.
scholarships for cultural, scientific and workers' improvement and specialization, and the establishment of popular libraries.
In all educational institutions, special attention shall be given to the formation of the moral and civic character of the students.

CHAPTER III
Article 72.
The enumeration of rights, duties and guarantees made by the Constitution, does not

Annex 2

THE PRESIDLN'1'L DL RkPUIILICA

RESUELVE:

4°.- Authorize the creation of a Medical Emergency Service with mobile units, for adults and children, owned by GALYNER S.A., located in Mercedes Street 1 24 (J Escritorio 20 , in the city of Mon tevi - deo, under the Technical Direction of Dr. Gustavo Javier Pardo Jasquin.

2'.- It is hereby established that prior to the operation of the aforementioned service, the necessary authorisation must be obtained from the Ministry of Public Health.

3'.- Communicate.
BATLLE, LUIS FRASCHINI.

MINISTRY O F HOUSING, SPATIAL PLANNING AND ENVIRONMENT

18

Law 17.283

Declárase de Interés General, de conformidad con lo establecido en el Artículo 47 de la Constitución de la República, que refiere a la protección del medio ambiente. (2.610*R)

LEGISLATIVE POWER

The Senate and the House of Representatives of the Eastern Republic of Uruguay, meeting in General Assembly,

DECREE

CHAPTER I INTRODUCTORY PROVISIONS

Article 1°.- (Declaration).- It is hereby declared to be of general interest, in accordance with the provisions of Article 47 of the Constitution of the Republic:

A) The protection of the environment, air quality, water quality, the land and landscape

B) The conservation of biological diversity and of the configuration and structure of the coast.

C) The reduction and proper management of toxic or hazardous substances and waste of any kind.

D) The prevention, elimination, mitigation, and compensation of the and negative environmental impacts

E) I he protection of shared environmental resources and of those located outside areas under national jurisdiction is a key element in the protection of the environment.

F) Regional and international environmental cooperation and participation in the solution of global environmental problems.

G) The formulation, instrumentation and implementation of regional environmental and sustainable development policy.

For the purposes of this Act, sustainable development means development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

This declaration is without prejudice to the provisions of the specific rules in force in each of the matters referred to.

Article 2'.- (Right of the inhabitants). - The inhabitants of the Republic have the right to be protected in the enjoyment of a healthy and balanced environment.

Article 3" (Duty of persons) - Individuals and legal persons, public and private, have the duty to refrain from any act causing depredation, destructoin or grave contamination of the environment

It is hereby declared by way of interpretation that, for the purposes of the provisions of Article 47 of the Constitution of the Republic and of the present provision, acts that cause serious depredation, destruction or contamination of the environment are considered to be those that contravene the provisions of the present law and of the regulatory norms of the matters referred to in Article 1.

Article 4' (Duty of the State): It is the fundamental duty of the State and of public entities in general to promote a model of environmentally sustainable development, protecting the environment and, if it is deteriorated, to recover it or demand that it be recovered.

Article 5° (Purpose): The purpose of the present general law for the protection of the environment is, in compliance with the mandate foreseen in article 47 of the Constitution of the Republic, to establish general basic provisions in line with national environmental policy and environmental management coordinated with the different public and private sectors.

CHAPTER II GENERAL PROVISIONS

Article 6'.- (Principles of environmental policy). - The national environmental policy established by the Executive Power shall be based on the following principles:

A) The distinction of the Republic in the context of nations as a "Natural Country", from an economic, cultural and social perspective of sustainable development.

B) Prevention and precaution take priority over any other criteria in environmental management and, where there is a danger of serious or irreversible damage, lack of absolute technical or scientific certainty may not be invoked as a reason for not taking preventive measures.

C) It is a prerequisite for the effective integration of environmental considerations into economic and social development, the gradual and progressive incorporation of new requirements, without having to recognise the consolidation of pre-existing situations.

D) The protection of children is a commitment for society as a whole, and individuals and representative organisations have a right and a duty to participate in this process.

E) Environmental management should be based on the recognition of its trans-sectoral nature, which requires the integration and coordination of the different public and private sectors involved, ensuring the national scope of environmental policy implementation and decentralisation in the exercise of environmental protection tasks.

F) Environmental management must be based on an adequate management of environmental information, in order to ensure its availability and accessibility by any interested party.

G) Increasing and strengthening international cooperation on environmental issues by promoting the development of common environmental criteria.

The principles that have been applied will also be used as an interpretative basis for resolving questions that may arise in the application of environmental protection rules and powers and in their relationship with other rules and powers.

Article 7'.- (Environmental management instruments). - The following constitute environmental management instruments:

A) The present law, other legal and regulatory norms, departmental norms and other provisions for the protection of the environment, as well as any instructions, directives or methodological guides that may be issued.

R) Environmental protection programmes, plans and projects.

C') Environmental information and environmental awareness, education and training.

D) The establishment of environmental quality parameters and standards.

E) The affidavits, the environmental impact assessment following a public hearing in accordance with and in the cases provided for in Articles 13 and 14 of Law № 16.466 of 19 January 1994, and the corresponding authorisation procedures.

F) Risk analyses and assessments, environmental audits and certifications, and environmental management.

C) The system of protected natural areas.

H) I.ex officio recovery and restoration plans to be approved.

I) Economic incentives and tribution.

J) Administrative sanctions and other complementary measures.

K) The institutional organisation of theenvironment.

i) All Ministries, Departmental Governments, Autonomous Entities and other State bodies, acting in coordination.

The Executive Power shall regulate the form and conditions in which the Ministry of Housing, Territorial Planning and Environment shall apply the management instruments not contained in the present law or in specific laws for the protection of the environment.

Article 8. - (Coordination): The Executive Power, through the Ministry of Housing, Territorial Planning and the Environment, shall be responsible for the exclusive coordination of the integrated environmental management of the State and of the public entities e- s--*eral·

In addition to the competences specifically assigned to this Ministry, all environmental matters, including sectoral matters, not legally assigned to another public body, shall fall within the competence of this Ministry.

The said Ministry may delegate to regional or local authorities the performance of the tasks of administrative management, subject to prior agreement with the respective region and to the conditions to be determined in each case.

Article 9' (Support and advice): The Ministry of Housing, Land Use Planning and the Environment shall support the environmental management of departmental and local authorities and public entities in general, especially through the creation and development of specialised environmental units or areas within them.

The Departmental Governments may request the advice of the Ministry of Housing, Territorial Planning and the Environment for the purpose of drawing up regulations on environmental protection.

Article 10.- (Rearrangement): The competence of the national, departmental and local authorities is subject to the provisions of Article 47 of the Constitution of the Republic and the provisions of this law and the otherlaws regulating the same.

No person may disregard requirements deriving from national or departmental environmental protection and/or conservation rules of equal status, issued in the framework of their respective com- petitions, under less stringent national or departmental rules, respectively.

Article 11.- (Environmental education): Public entities shall promote the formation of environmental awareness in the community through education, training, information and dissemination activities aimed at the adoption of behaviour consistent with the protection of the environment and sustainable development.

To this end, the Ministry of Housing, Spatial Planning and the Environment shall prioritise the planning and implementation of activities in coordination with education authorities, local and national par- ticipations and non-governmental organisations.

Article 12.- (Annual environmental report): The Executive Power, through the Ministry of Housing, Territorial Planning and the Environment, shall prepare an annual national report on the environmental situation, which shall contain systematised and referenced information, organised by thematic areas.

The said report shall be transmitted by the Executive to the General Assembly, to the Congress of Intendants and to the De- partmental Governments.

It will be made widely available to the public and copies will be kept at the Ministry for interested parties.

Article 13. - (Tax benefits). - The Executive Power is empowered to include within the scope of Article 7' 0e of Law N' 16.906, of 7 January 199h, the following:

A) The inue bles goods intended for the elimination or initigaci6n of the negative environmental impacts of the same or to restore the affected environmental conditions.

B) Fixed improvements for the treatment of the main aeticts of industrial and agricultural activities.

Article 14 (Complementary measures): In order to ensure compliance with the provisions of this law and other environmental protection regulations, the Ministry of Housing, Territorial Planning and the Environment may, at its own discretion, adopt the following measures:

A) To issue the administrative acts and carry out the material operations to prevent, impede, diminish, monitor and correct the depredation, destruction, contamination or risk of damage to the environment.

B) To impose the treatment of waste or emissions, whatever their source, and the self-monitoring of such waste or emissions by the generators themselves.

C) Demand the constitution of a real or personal guarantee, sufficient in the opinion of the Administration, for the faithful compliance with the obligations derived from the environmental protection regulations or for the damage that may be caused to the environment or to third parties.

D) To impose the prcvcntiv u suspension of the presumed dangerous activity, while the investigations to establish it or the studies or works aimed at analysing or preventing the pollution or environmental affectation are being carried out.

E) Adopt precautionary measures for the seizure of the objects or proceeds of the allegedly unlawful activity and, if it deems it necessary, take administrative seizure when, according to the nature of the offence, it could lead to their confiscation.

Article 15.- (Penalties). - Without prejudice to the provisions of Article 6 of Law № 16.112, of 30 May 1990, Articles 453 and 455 of Law N' 16.170, of 2 December 1990, and Article 4 of Law № 16.466, of 19 January 1994, when the imposition of penalties for failure to comply with the rules for the protection of the environment is applicable, the following shall apply

The Ministry of Housing, Spatial Planning and the Environment may also be involved:

A) Sanction with a warning when the offender has no previous offences of the same or similar nature and these are considered minor.

B) In cumulative form with other sanctions that may be applicable, in the case of offences that are not considered minor, proceed to the public dissemination of the sanctioning resolution, which will be at the offender's expense when it is carried out through publication in two national newspapers and one newspaper in the district where the offence was committed.

C) In addition to other appropriate penalties, in the case of offences which are not considered minor, confiscation of the objects or products of the unlawful activity, as well as vehicles, vessels, aircraft, instruments and devices directly linked to the commission of the offence or the transit of the objects or products, without the ownership of the objects or products being of any relevance.

In cases where, for various reasons, the deco- minated objects are to be destroyed, the offender may choose to destroy them himself, as directed and to the satisfaction of the administration, or to leave them at the expense of the administration, in which case the costs incurred shall be borne by the offender.

Where actual seizures are not possible, a fictitious seizure shall be made at the time the offence is established.

D) In the case of infringements that are considered serious or of repeat or continuous offenders, order the suspension for up to 180 days of the registrations, authorisations, authorisations and permits within its competence for *the* respective activity.

In addition to the corresponding sanctions, in the case of infringements committed by public entities, the Ministry of Housing, Land Planning and the Environment shall report the infringement to the Executive and the General Assembly.

Article 4 fi.- (Recomposition ex officio): When the responsible party refuses to comply with the recomposition, reduction or mitigation provided for in Article 4 of Law No. 16.466 of 19 January 1994, the judicial imposition of fines may be requested or it may be done ex officio, with the costs incurred being borne by the offender.

CHAPTER III SPECIAL PROVISIONS

Article 17.- (Air quality): It is prohibited to release or emit into the atmosphere, directly or indirectly, substances, materials or energy above the maximum limits or in contravention of the conditions established by the Ministry of Housing, Land Use Planning and the Environment.

For these purposes, the Ministry shall take into account levels or situations which may endanger human, animal or plant health, deteriorate the environment or cause serious risks, damage or nuisance to living beings or property.

Article 18.- (Ozone Layer): The Ministry of Housing, Land Use Planning and the Environment, as the national authority responsible for the implementation and application of the Convention for the Protection of the Ozone Layer (1985), approved by Law No. 15.9hG, of 19SS 19, and of the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) and amendments thereto, approved by Law N- IG.157, of 12 November 1990, establishes the provisions on the protection, placing on the market and use of substances that affect the ozone layer.

Article 19.- (Climate change). - The Ministry of Housing, Territorial Planning and the Environment, as the national authority responsible for the implementation and application of the United Nations Framework Convention on Climate Change (1992), approved by Law No. *16,517* of 22 July 1994, shall establish the necessary measures for the implementation and application of the Convention, in accordance with the provisions of the United Nations Framework Convention on Climate Change (1992).

The EU shall take measures to mitigate the causes and adapt to the consequences of climate change and, in particular, shall regulate greenhouse gas emissions.

Where appropriate, it shall coordinate, with sufficient powers, the tasks and functions of other public and private entities relevant to the provisions of this Article.

Article 20.- (Chemical substances). - It is in the general interest to protect the environment against all effects which may result from the use and handling of chemical substances, including, or within the same, basic elements, compounds, natural complexes and formulations, as well as bicycles and articles containing them, especially those which are considered toxic or dangerous.

The Ministry of Housing, Territorial Planning and the Environment shall determine, by virtue of the present law and the regulations issued by the Legislative Power, the conditions applicable for the protection of the environment, to the production, import, export, transport, packaging, labelling, storage, distribution, marketing, use and disposal of those chemical substances that have not been regulated by virtue of the sectoral tasks assigned to the Ministry itself or to other national bodies.

In any case, such bodies shall incorporate in their regulations, in coordination with the Ministry of Housing, Land Management and the Environment, provisions to ensure adequate levels of protection of the environment against adverse effects arising from normal use, from actions or from wastes which they may generate or derive.

Article 21.- (Waste). - It is in the general interest to protect the environment against any impact that may result from the handling and disposal of waste of any kind.

The Ministry of Housing, Territorial Planning and the Environment - in agreement with the Departmental Governments, as appropriate and in accordance with article S° of the present law - shall issue the necessary provisions and apply the necessary measures to regulate the generation, collection, transport, storage, commercialisation, treatment and final disposal of waste.

Article 22.- (Biological diversity): The conservation and sustainable use of biological diversity is of general interest, as a fundamental part of national environmental policy and for the purposes of the implementation and application of the Convention on Biological Diversity (1992), approved by Law No. 16,408 of 27 August 1993.

The Ministry of Housing, Spatial Planning and the Environment shall establish measures for the identification, monitoring and conservation of biodiversity, as well as ensure the sustainability of the use of its components, and shall coordinate the tasks and functions of other public and private entities in the field of conservation and use of species and their habitats with appropriate powers.

Article 23.- (Biosafety): The Ministry of Housing, Territorial Order and Environment, in accordance with the regulations issued by the Executive Power, shall issue the necessary provisions and apply the necessary measures to prevent and control the environmental risks derived from the creation, handling, use or release of beneficial organisms modified as a result of biotechnological applications, insofar as they may affect the conservation and sustainable use of biological diversity and the environment.

Where appropriate, coordinate with other public and private entities on measures to be taken in respect of other risks arising from such activities but related to human health, industrial and occupational safety, good laboratory practice and pharmaceutical and food use.

The introduction of living modified organisms resulting from the

*In areas under national jurisdiction, whatever the form or regime under which it is carried out, it shall be subject to the

prior authorisation by the competent authority. As long as no such authority is designated or when the introduction could pose a risk to biological diversity or the environment, the Ministry of Housing, Spatial Planning and the Environment shall be competent.

Article 24.- (Other regulations): The matters contained in Article 1' of the prcscn Mc Law and not included in this Chapter shall be governed by the respective specific laws.

CHAPTER IV
OTHER PROVISIONS

Article 25 (Water inventory): The Ministry of Public Works and the Ministry of Housing, Territorial Planning and the Environment shall jointly keep the inventory referred t o i n Article 7 of Decree-Law № 14.S59 of 15 December 1977, each of them being responsible for the areas corresponding to them as the competent Ministry for the purposes of the application o f the Water Code.

Article 26.- (Costs). - For the purposes of the provisions of Articles 153 and 154 of Decree-Law No 14.559 of 15 December 1978, as amended by Articles 192 and 193 of Law No 15.9(13) o f 10 November 1997, it shall be construed as follows:

A) Detrimental modification to the configuration and structure of the coast" means any exogenous alteration of the dynamic equilibrium of the coastal system or of any of its components or determining factors.

B) The term 'file which has been opened with a hearing of the interested parties' means the granting of a hearing to the interested parties, prior to the adoption of a decision, in accordance with the general rules of administrative action and procedure in the central administration.

Article 27.- (FONAMA): The following paragraphs are added to article 454 of Law № 16.170, of 28 December 1990, which created the National E n v i r o n m e n t Fund:

"(F) the amount of forfeitures and the proceeds from the sale of actual forfeitures ordered for infringement of environmental protection regulations.

G) L1 produced from the imposition of astreiiites, as foreseen i n article 16 of the general law for the protection of the environment".

Article 28.- (Judicial recovery): Expenses derived from the imposition of sanctions for infringement of the environmental protection rules and expenses incurred i n t h e r e c o m p o s i t i o n , reduction or mitigation of environmental impacts ex officio or in the restitution of the original configuration or structure of the coastal defence strip shall be included in the provisions of Article 455 of Law No. 16,170 of 28 December 1990.

The final judgments that establish them, as well as those that impose fines, shall constitute an enforceable title. The Court of First Instance corresponding to the defendant's domicile, determined according to the date o n which the resolution was issued, shall be competent for its enforcement, whatever the amount, except in the department of Montevideo, where the turn shall be established in accordance with the rules of procedure in force.

Where the defendant is the Ministry of Housing, Land Use and Environment, the courts in Montevideo will have jurisdiction.

Article 29.- (Repeal) - Repeal Article 11 of Law № 16.112, of 30 May 1990.

Sala de Scsioncs de la Càmara de Rcprcscntantcs, en Montevideo, a 13 November 2000. WASHI NCrTON ABDALA, President; IORACI O D. CATALURDA, Secretary.

M1N1S'1LRIO DL V1VILN DA, ORDLNAM1LN 1'O TERRITORIAL Y MEDI O AMBIENTE MINISTERI O DEL INTERIOR
MINISTRY OF FOREIGN AFFAIRS MINISTRY OF ECONOMIC AFFAIRS AND FINANCE MINISTRY OF NATIONAL DEFENCE
ministry of education and culture ministry of transport and public works ministry of industry, energy and mining
MINISTERI O F LABOURAND SOCIAL SECURITY MINISTERI O F PUBLIC HEALTH
M1N1S'1'LR1O DL GANADERÍA, AGMCUL1'URA Y PLSCA MINISTERI O DE TURIS MO
MINISTRY OF SPORT AND YOUTH

Montevideo, 2S November 2000

Complete, acknowledge receipt, co-initiate, publish and insert in the Official Journal of the European Union.
National Register of Laws and Decrees.
BATLLE, OSCAR GO ROSITO, GUILLERMO STIRLING, DIDIER OPERTTI, ALBERTO BENSI ON, ROBERTO YAVARONE, ANTONIO MERCAD ER, LU CI O CAC ERES , SER GI O AB REU, ALVAR O AI.ONS O, HO R ACIO FERNAND EZ, MARTIN AC UIRREZARAI.A, Airoxso VARELA, JAIME TROBO.

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Resolution 1.416/000

Autorízase la modificación del Artículo 3.4 del Contrato de Préstamo y Aporte Financiero propuesta por el Programa Credimat la Dirección Nacional de Vivienda del Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente. (2.625)

MINISTRY OF HOUSING, TERRITORIAL PLANNING AND ENVIRONMENT
MINISTRY OF FOREIGN AFFAIRS
MINISTRY OF ECONOMY AND FINANCE

Montev-ideo, 5 December 2000

ISTO: the note presented on 12 May 1999 by the Credimat Programme of the National Housing Directorate of the Ministry o f Housing, Regional Planning and the Environment;

WHEREAS: (1) t h e amendment o f Article 3.4 of the Loan and Financing Agreement signed between the Ministry of Housing, Spatial Planning and the Environment and the Kreditanstalf fur Wiederaufbau (KFW) is hereby considered. 4 of the Loan and Financing Agreement between the Ministry of Housing, Spatial Planning and the Environment and the Kreditanstalf fur Wiederaufbau (KFW) is hereby amended;

(11) that this amendment entails a correction of the date for the amortisation of the dick o with treatment for three semesters, thus starting its amortisation o n 31 December 2000;

III) that such modification is also approved by KFW;

CONSIDERING: I) that the Technical Advisory - Legal Area of the Ministry of Housing, Land Planning and the Environment, informed that the same stages that apply for the formalisation of a Contract of this type, must be followed for an amendment; that is, applying Decree No 1(lh/92, with the prior authorisation of the Executive Power, with the intervention of the Ministries of Economy a n d Foreign Affairs;

II) that the National Directorate of Housing of the Ministry o f Housing, Territorial Planning and the Environment also considers that it should proceed in the manner indicated by the Advisory Committee;

IN ACCORDANCE WITH the foregoing and with the provisions of Decree No 108/92 of 16 March 1992;

THE PRESIDENT OF THE REPUBLIC

RESOLVES:

1'.- Authorise the modification of article 3.4 of the L o a n and Financial Contribution C o n t r a c t proposed by the Credimat Programme of the National Housing D e p a r t m e n t of the Ministry of Housing, Regional Planning and the E n v i r o n m e n t .

2'. - Communicate, publish and pass to the Ministry of Housing, Spatial Planning and the Environment. -
BATLLE, CAR LOS CAT, DIDIER OPERTTI , ALBERTO BENSION.

Annex 3

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Energy Policy 2005-2030

Preamble

The energy issue is complex because of its multidimensionality. At least six different thematic aspects to be taken into account can be visualized.

The first is geopolitical: access to primary energy sources poses a serious difficulty for many countries (92% of the world's primary energy consumption is based on oil, natural gas, coal and uranium, raw materials that are very unevenly distributed worldwide).

The second aspect is technological: it is not enough to possess (or import) primary energy; it is also necessary to have access to the technology to transform primary energy into secondary and useful energy.

The third is economic: due to growing global demand, both energy sources and technologies are becoming increasingly expensive.

The fourth aspect is ethical: 92% of the primary energy consumed worldwide is non-renewable; humanity is spending in a couple of centuries what nature took millions of years to develop, so its use must be carried out in a responsible manner.

The fifth aspect is environmental: energy production and use are primarily responsible for human emissions of carbon dioxide, which has the greatest impact on global climate change (60% of human carbon dioxide emissions are generated during energy production and use).

The sixth and last aspect is social: access to energy is very unequal in the world and also within each country; large sectors of the world's population lack adequate access to energy (about 1.7 billion human beings live, from the energy point of view, as in the 18th century: they lack electricity and the only energy they have access to is firewood they get near their homes).

This multivariate and complex characteristic is at the root of the world's energy difficulties. But at the same time, energy policy can be a powerful tool for developing a country and promoting social equality. Indeed, energy accounts for a significant percentage of each nation's gross product; the investments needed to maintain the level of infrastructure required to meet energy needs alone amount to 3 to 5% of the GDP of many countries.

Many of these investments require the development of new knowledge, the development of new technologies, the generation of industrial capacities and jobs.

highly qualified. On the other hand, energy policy can become a tool to promote equality within each society, fostering social integration, promoting healthy consumption habits and, ultimately, improving the quality of democracy.

For these reasons, the "solution to the energy issue" can never be linear, but must arise from a rigorous strategic planning with a globalizing view and a careful combination of solutions arising from the balance between all these aspects. This requires a complementation between technical work and political action, with strategic guidelines defined from a viewpoint of at least twenty years and with lines of action carefully structured and maintained throughout several periods of government, all of this inserted in a policy of productive and social development of the country.

After a discussion that began in 2005, with the participation of all public actors involved in the energy issue in the country, in 2008 the National Directorate of Energy and Nuclear Technology submitted to the Executive Branch a proposal for a global Energy Policy with a long-term vision. It is based on four elements:

- The Strategic Guidelines, which define the main conceptual axes of the energy policy.
- Goals to be achieved in the short (5 years), medium (10 to 15 years) and long (20 years and more) term.
- The Lines of Action necessary to achieve these Goals.
- Permanent Situation Analysis of the energy issue in the country, the region and the world.

While the Strategic Guidelines and Goals (mainly the medium and long term ones) should transcend a government, so it is desirable that they have a broad agreement among all political parties, the Lines of Action are more dynamic and should be reviewed periodically, in light of the Situation Analyses, which should be repeated on a regular basis.

In August 2008, the Executive Branch approved this Energy Policy. The last Situation Analysis and the last revision of the Lines of Action date from December 2009.

In February 2010, following the initiative of the government elected in November 2009, which proposed the creation of a Multiparty Energy Commission, the core aspects of this energy policy were endorsed by the three political parties that are currently in the parliamentary opposition.

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A) Strategic Energy Policy Guidelines

(Approved in August 2008 by the Executive Branch)

Introduction

The central objective of the Energy Policy is to *satisfy all national energy needs, at costs that are adequate for all social sectors and that contribute to the country's competitiveness, promoting healthy energy consumption habits, seeking the country's energy independence within a framework of regional integration, through sustainable policies from both the economic and environmental points of view, using the energy policy as an instrument to develop productive capacities and promote social integration.*

In order to achieve this central objective, 4 major strategic axes are structured:

- Institutional Axis
- Axis of supply
- Demand Axis
- Social Axis

Institutional Axis

General Objective

The Executive Branch (EP) designs and conducts the energy policy, articulating the various actors. State-owned companies (which must be modern, efficient and dynamic) are the main instrument for the implementation of such policies. Private actors participate according to the conditions defined by the EP, contributing to the development of the productive country. The Regulatory Unit regulates and supervises, based on guidelines defined by the EP, in aspects of safety, quality and consumer protection. The regulatory framework for the entire energy sector and each sub-sector must be clear, transparent and stable, providing guarantees to all stakeholders (consumers, public and private companies, etc.).

Particular objectives:

1) The Ministry of Industry, Energy and Mining (MIEM), through the National Energy Directorate (DNE) (which must have its own stable and highly qualified human resources) plans, designs, evaluates and conducts energy policy, establishes regulations and coordinates the different public (energy companies, ministries, municipalities, agencies) and private actors. The

energy planning should be based on modern mathematical energy planning models, fed with adequate information, with which various supply and demand scenarios should be tested periodically.

2) Public energy companies are leaders, modern, efficient and dynamic, with an independent business management, framed in the energy policy defined by the EP. In order to face, with efficiency, transparency and competitiveness, their role within the energy and productive sector of the country, there must be adequate financial mechanisms to achieve the necessary investments in infrastructure, the updating of their human resources capacities and the modernization of structures and procedures.

3) Private actors participate in the energy sector according to the guidelines determined by the EP, trying to avoid the existence of dominant actors within each subsector. The way will be sought for this private participation to contribute to the strengthening of the national productive apparatus, generating technology transfer, qualifying specialized labor, developing industrial capacities, etc.

4) The Water and Energy Services Regulatory Unit (URSEA) regulates in matters of safety, quality and consumer protection, according to the policy and specific guidelines defined by the EP, and will supervise, with political and technical independence, compliance with such regulations.

5) In order to provide guarantees to all stakeholders, it is necessary to have complete, clear, transparent and stable regulatory frameworks, both for the energy sector as a whole and for each sub-sector. This framework must be adapted to the objectives of the energy policy and must be an instrument for its execution and control.

6) The set of tariffs for the sector, which must be defined by the Executive Branch, must reflect the real costs of the energy companies, although at the same time it must be an instrument of the country's energy, social and productive policy. If subsidies are defined, they must be explicit and transparent, and their origin and destination must be clearly determined, as well as their strategic objective.

7) To guarantee national capacities for the development of the system, the country must have financing funds to promote research, development and innovation in energy issues, as well as specific instruments for the promotion of investments and the development of industrial capacities in this area.

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Energy Supply Axis

Overall objective

Diversification of the energy matrix, both in terms of sources and suppliers, seeking to reduce costs, reduce dependence on oil and encourage the participation of indigenous energy sources, particularly renewable sources. This process will promote the transfer of technology and the development of national capacities and will seek to minimize the environmental impact of the sector.

Particular objectives:

1) At the base of the system, it is necessary to regularly expand infrastructure and logistics to strengthen the energy system as a whole, eventually seeking synergies between public companies or between public and private companies linked to each activity: poly-pipelines, fuel storage capacity, infrastructure for the entry of energy, port and/or buoy, etc.

2) Energy integration mechanisms should be sought, particularly with the countries of the region, both in terms of physical connection and the signing of stable energy exchange contracts, both firm and occasional. Likewise, joint purchases of extra-regional energy will be sought.

3) Given that the country has abundant renewable energy sources that can generate energy at market costs, we will promote the introduction of those forms of energy that do not require subsidies, such as medium and large wind power, biomass, solar thermal, the use of certain wastes, micro-hydro, and certain biofuels, although other forms of renewable energy use will also be tested through limited pilot experiences.

4) Electrical subsector:

    a. The country must have a schedule for the incorporation of electricity generation with short, medium and long term horizons, identifying the goal for each type of source to be incorporated and the modality of each investment. The goals for the incorporation of renewable energies must be accompanied by the corresponding analysis and promotion policies.

    b. There must be an agreed schedule for the expansion of electricity transmission and distribution networks to support both the growth in demand and the incorporation of distributed generation, agreeing on the sources and methods of financing the investments.

5) Liquid fuels subsector:

    a. To seek the vertical integration of ANCAP, by searching for oil and gas in national territory and evaluating the possibility of joint oil exploration in other countries, through commercially, technologically and politically sound businesses.

    b. Expand and modernize La Teja's refining capacity, introducing "deep conversion" technology, a cogeneration plant and paying special attention to the environmental impacts of both the refining process and the liquid fuels themselves.

    c. Promote the national development of biofuels, through ventures that seek to generate a diversity of co-products (electric power, animal feed, biofertilizers, sugar for human consumption, etc.), mitigating competition with food production in the use of soil and water.

6) Seek ways to intensify the participation of natural gas in the Uruguayan matrix in a robust manner and at a competitive price, both at the residential and industrial level and, eventually, for transportation or other uses.

7) Explore the national territory in search of non-renewable energy sources: shale, coal, shale gas, uranium, etc. Promote pilot projects for the use of these energies.

8) Promote energy generation at home, through solar water heating, micro-wind generation, use of biomass, firewood, etc.

9) Maintain a permanent work of technological prospective so that the country is prepared to incorporate new forms of energy (second and third generation biofuels, hydrogen, wave energy, geothermal energy, photovoltaic and concentrated solar energy, etc.).

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Energy demand axis

General Objective

Promote Energy Efficiency in all sectors of national activity (industry, construction, transportation, agriculture, homes, etc.) and for all uses of energy (lighting, appliances, vehicles, etc.) through a better use of energy resources, without having to reduce production levels, comfort and attention to all daily needs, promoting a cultural change in relation to consumption habits, through the formal and informal education system.

Particular objectives:

1) The State, through its various agencies and public policies, should be a paradigmatic example of rational energy use.

2) Through the formal education system and various forms of cultural dissemination, appropriate information and promotion of the comparative advantages of efficient energy use should be encouraged.

3) The country must have the appropriate regulations and tax structure to promote Energy Efficiency, mainly in terms of insulation in construction, lighting, vehicles and other energy-consuming equipment, etc.

4) The country must have adequate financing mechanisms to promote technological and process modifications, both at the residential and industrial levels, to improve energy efficiency.

5) Given that the transportation sector has historically been the country's main energy consumer, it is necessary to integrate the energy perspective into state transportation policies in order to promote changes in modes, means and sources that will increase the sector's energy efficiency. It should be taken into account that only through an accumulation of specific policies (promotion of railroads and river transport, promotion of a more efficient and attractive urban and interurban public transport system for users, promotion of biofuels and the beginning of the use of hybrid and electric vehicles, replacement of merchandise and passenger transport fleets, promotion of efficient driving, tax adaptations, etc.) can a significant energy impact and a decrease in oil dependence be achieved.

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Social focus

General Objective

Promote adequate access to energy for all social sectors, safely and at an affordable cost, using energy policy as a powerful instrument to promote social integration and improve the quality of our democracy.

Particular objectives:

1) It is necessary to satisfy the energy needs of the poorest sectors of the population, testing different alternatives of social intervention, such as an energy basket, that allow access to energy in safe conditions (avoiding precarious connections that cause accidents), at an accessible cost for the possibilities of the weakest sectors, promoting the responsible use of energy and avoiding unwanted burdens for the rest of society. These initiatives should be inserted in the overall social policy of the State and should be conducted in a multidisciplinary and multi-institutional manner.

2) Universal access to energy for all the country's inhabitants must be achieved through a complement of different types of energy and technologies, with solutions adapted to the needs and territorial context of each household.

3) Access to adequate information (comparison of sources, equipment, costs, short and medium term projections, etc.) must be guaranteed for all citizens, enabling them to make appropriate energy-related decisions, both at the domestic and productive levels. The ultimate goal is to improve the quality of democracy, promoting empowered citizens with adequate information to make decisions.

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B) Goals to be achieved

Based on the Strategic Energy Policy Guidelines, Goals to be achieved in the short, medium and long term were defined:

1) **Goals to 2015 (short term):**

- The share of indigenous renewable sources has reached 50% of the total primary energy matrix. In particular:
    - The share of non-traditional renewable sources (wind, biomass residues and micro-hydro generation) reaches 15% of electricity generation.
    - At least 30% of the country's agro-industrial and urban waste is used to generate various forms of energy, transforming an environmental liability into an energy asset.
- Oil consumption in transportation has decreased by 15%, compared to the baseline scenario, through the promotion of new modes, means, technology and sources.
- Universal access to energy has been expanded to reach, in particular, 100% electrification of the country through a combination of mechanisms and sources.
- The culture of Energy Efficiency has permeated throughout society.
- The country has domestic companies producing energy inputs and developing energy-efficient processes.

2) **Goals to 2020 (medium term):**

- The optimal level is reached in relation to the use of renewable energies, particularly wind energy, biomass, solar thermal and biofuels.
- Balance is achieved in relation to the use of waste to generate energy.
- The use of natural gas in the global energy matrix has reached a level of stability and sustainability.
- The La Teja refinery has completed its modernization process; in particular, it is capable of processing heavy crudes.

- ANCAP's vertical integration has been achieved.
- Exploration of the national territory in search of energy resources has been completed.
- The country has developed pilot schemes using new energy sources and/or technologies under development.
- The country's energy consumption has decreased 20% in relation to the trend scenario, through a combination of actions that promote Energy Efficiency.
- Adequate access to energy has been achieved for all sectors of society.
- The country has leading companies at regional level, producing energy inputs and developing processes that promote Energy Efficiency.

3) Goals to 2030 (long term):

- The Uruguayan energy model is a model worldwide; in particular, the country's energy intensity is one of the best in the world.
- The country has saved at least ten billion since 2010 by substituting sources and promoting Energy Efficiency, in relation to the baseline scenario.
- The country has leading companies worldwide, producing energy inputs and developing processes that promote Energy Efficiency.
- The country is a leader in the use of certain energy sources and in the development of certain energy technologies and processes.
- Regional energy integration has been achieved; in particular, there are bi- and tri-national projects in operation.

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C) Lines of Action

(Last revised: December 2009)

1) Strongly strengthen the capacities of the National Energy Directorate (DNETN), providing it with a stable, efficient, highly qualified and remunerated technical team (with salary levels competitive with those of its peers in state agencies of the energy sector, UTE, ANCAP, URSEA, ADME), a prototype of State reform.

2) Revision of the URSEA law, in accordance with the Strategic Guidelines of the Energy Policy, avoiding overlapping of functions with those of the DNETN and reinforcing its regulatory and supervisory capacities in aspects of quality, safety and consumer protection, under the political definitions of the Executive Branch.

3) Adapt the regulatory framework of the energy sector, adapting it to the Strategic Guidelines of the Energy Policy. Strengthen the regulatory framework of each subsector, in particular:

    - Revising the regulation of the electricity sector law, adapting it to the reality of our country and to the current policy.
    - Developing regulations for the distribution of liquid fuels.
    - Creating a regulatory framework for the natural gas subsector.

4) To centralize in the Executive Branch the international energy links and, in particular, with the governments of the region, integrating the energy policy with that of the Ministry of Foreign Affairs, seeking solid and stable international commitments.

5) Promote the necessary infrastructure expansions to strengthen the energy sector as a whole: pipelines, storage capacities, ports, buoys, among others.

6) Procure the most appropriate financing mechanisms to enable public energy companies to make the necessary investments in infrastructure to fulfill their mission.

7) Incorporate 300 MW of wind power generation and 200 MW of biomass, through private investment, which should be operational by 2015.

8) Design mechanisms to promote the introduction of micro-hydraulic generation.

9) To complete as soon as possible the ongoing studies of electricity generation alternatives for the medium and long term: coal, energy crops and, in particular, to finalize the work of the multi-party commission studying the feasibility of the nuclear option.

10) Define a tentative schedule for the incorporation of electricity generation for the short, medium and long term, including goals for each of the sources.

11) Define a tentative schedule for the expansion of transmission and distribution capacities of the electricity sector, taking into account, in particular, the needs of distributed generation and the demand of new electro-intensive productive enterprises.

12) Completion of the new electrical interconnection with Brazil, San Carlos-Presidente Medici.

13) Continue promoting ANCAP's vertical integration through:

- Mixed investments to continue the exploration of the Uruguayan maritime platform in search of oil and gas.

- Partnership with oil companies for the exploitation of oilfields abroad, through robust businesses, both from the economic, technological and political points of view.

14) Continue upgrading the capacities of ANCAP's refinery, completing the installation of the desulfurization plant, beginning the process of installing a deep conversion module and a cogeneration plant.

15) Complete the necessary studies and make the necessary decisions to increase the participation of natural gas in the energy matrix, in a robust manner and at a reasonable price: regasification plant and/or new dedicated gas pipeline, through mixed investments.

16) Continue to promote public and private investments to expand domestic biofuel production.

17) Under the "Promotion of Solar Thermal Energy" law, to promote instruments to encourage its introduction in the country by citizens and companies, particularly industrial ones.

18) Culminate the design of mechanisms to promote the generation of energy for residential use from renewable energies.

19) Design mechanisms to promote the industrial use of solid or liquid waste with high biological content (in dairy farms, meat packing plants and other agroindustries) to generate biogas to be used in their industrial processes.

20) To resolve, together with the municipalities, mechanisms for the effective transformation of municipal waste into energy.

21) Promote mixed investments to continue the search for other energy sources in the national territory: coal, shale, shale gas, uranium, and promote pilot projects for their eventual use.

22) Under the Energy Efficiency (EE) law:

    a. Culminate the labeling of appliances y promoting replacement plans.

    b. Culminate the process of regulatory adaptation to promote EE.

    c. Monitor the newly created financial instruments and lines of financing and promote possible adaptations.

    d. Designing EE plans for each government agency.

    e. Continue to promote dissemination campaigns through the formal education system and beyond.

23) Promote cogeneration and other instruments to improve Energy Efficiency at the industrial level, supporting industrialists with information, voluntary monitoring and specific credit lines.

24) To introduce the energy axis in an integrated vision of cargo and passenger transportation with emphasis on energy efficiency, by promoting rail and river transportation, promoting collective passenger transportation, encouraging other modalities of urban mobility, promoting the rejuvenation of truck and bus fleets, completing the tax and regulatory review, promoting electric and hybrid vehicles, among others.

25) To deepen the work of energy and technology foresight, in order to adequately plan the introduction of new energy alternatives for the long term.

26) Maintain the Energy Sector Fund, an instrument for financing Research, Development and Innovation at the academic and business levels.

27) Improve the link between the education sector and energy issues.

28) Review of all energy tariffs, led by the EP. These should reflect the real costs of each company, but the global tariff policy should be an instrument of the energy policy and should be at the service of the country's social and productive policies. In case cross-subsidies are resolved, they must be clearly defined and explicit.

29) In coordination with the State agencies in charge of social policy, continue developing tools to guarantee adequate access to energy for the most disadvantaged sectors, in order to ensure safe access to energy and promote social integration. In particular, to culminate the testing of pilot solutions in pilot neighborhoods, through the introduction of a basket of basic energy sources, such as electricity, supergas, firewood, simple technology for the use of renewable energies, among others, seeking solutions adapted to the needs of each context.

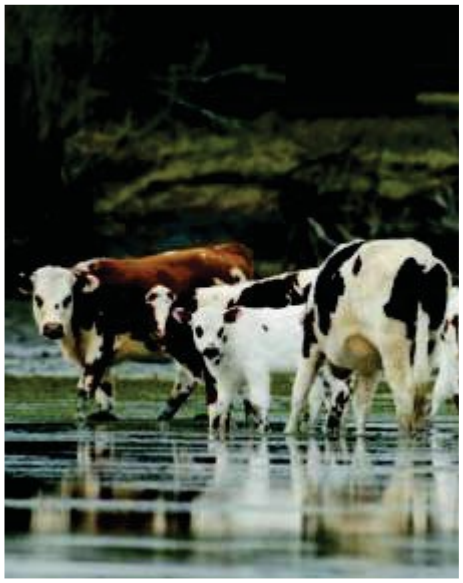
30) Promote universal access to energy throughout the country, through accessible solutions adapted to each socioeconomic and geographic context: water heating through solar panels, energy-efficient use of firewood, use of biogas from agricultural and livestock waste, etc.

31) Design the appropriate instruments to achieve 100% electrification of the country, through a combination of the traditional laying of grids and the use of off-grid generation systems, through hybrid systems based essentially on renewable energies (wind, solar photovoltaic, diesel or biofuels). In particular, the integration of these initiatives with other State policies, such as land use and environmental policies, will be analyzed, seeking synergies for sustainable development at the territorial level, promoting, among other objectives, rural settlement in decent living conditions.

32) Improve citizen information on energy issues, as a basis for making appropriate decisions.

Annex 4

Annex 004



NATIONAL CLIMATE CHANGE RESPONSE PLAN

DIAGNOSIS AND STRATEGIC GUIDELINES

National System of

Response to Climate Change and Variability

GOVERNMENT OF URUGUAY

January 2010

FOREWORD

Climate change is the greatest threat that the human species must overcome to survive as such. The consequences of not reacting to this threat, as well as of doing so too late, erroneously or insufficiently, would be too great and irreversible.

Uruguay recognizes this challenge and faces it with responsibility and coherence at both the international and domestic levels: it has approved the UN Framework Convention on Climate Change and the Kyoto Protocol; at the regional level, it promotes joint projects to identify and mitigate vulnerabilities; and it has created a National Climate Change Response System to coordinate and plan the public and private actions necessary for risk prevention, mitigation and adaptation to this phenomenon.

This Plan is part of this strategy and at the same time is the backbone of it.

It is not a catalog of good intentions written on paper. It is a system of agreements, commitments, objectives, goals and work methodology resulting from the work carried out during several months of the present year collectively by technicians specialized in the matter, national and departmental governors, representatives of productive sectors and of the civil society. It cannot be any other way when the problems discussed are so vast, complex and affect everyone.

The effort was intense and fruitful. This Plan does not aspire to be infallible or miraculous, but it is a technically consistent and institutionally, politically and socially legitimized tool for responding to climate change.

This tool is at the disposal of citizens and future governments, and is open to new contributions that improve it and help to continue building the nation that we Uruguayans want and wish for.

mCfCCCHlO8.

Montevideo, December 2009 -

Dr. Tabaré Vázquez.
Presidente de la República Oriental del Uruguay

IV. STRATEGIC CONSIDERATIONS

4.1 GUIDING PRINCIPLES

The approach adopted by the SNRCC for the development of the National Climate Change Response Plan is based on the following principles:

✓ **Sustainable Development**

Sustainable development implies meeting the needs of present generations without compromising the ability of future generations to meet their own needs. The PNRCC is part of the sustainable development policy adopted by the Uruguayan State. The decisions and actions adopted in relation to climate change and variability must be implemented through environmentally sustainable planning, with social equity and territorial cohesion.

✓ **Caution and Prevention**

Although uncertainty must be managed as a substantial condition in the area of climate change, the absence of scientific information or certainty should not be used as a reason to postpone the adoption of preventive measures to anticipate potential negative effects and achieve progressive adaptation to climate change.

✓ **Comprehensiveness and cross-sectoriality**

Climate change and its consequences affect the quality of life of the population, economic activity and the environment in different ways throughout the territory. These differences can produce or exacerbate both sectoral and territorial conflicts. An integrated and cross-sectoral approach will be adopted in order to manage conflicts and take advantage of any synergies that may arise.

✓ **Coordination and Cooperation**

Based on the recognition of the integral and cross-cutting nature of climate change and its consequences, coordination and cooperation of the different public and private entities involved is required -without prejudice to the competencies attributed to each one- in order to ensure the national scope of the implementation of the policies developed in this regard.

✓ **Decentralization and Subsidiarity**

The measures adopted in response to climate change and variability must take into consideration regional and local differences in the territory. Decentralization and the promotion of local and regional development will therefore be promoted, giving value to the territorial vision of vulnerability and the impacts of climate change and strengthening local capacities to assume their responsibilities. The national State, to

through the different instances of public administration, must collaborate -and i f necessary- participate in a complementary manner in the actions of local authorities.

✓ **Participation and Coordination**

Adaptation to the expected impacts of climate change and variability is a commitment that concerns society as a whole, so that individuals and representative organizations have the right and the duty to participate in the adaptation process. Special consideration should be given to proposals for promoting dialogue and consultation between the public, private and social sectors.

✓ **Equity and Solidarity**

Conditions of economic and social exclusion increase the population's risk of suffering the consequences of climate change with greater intensity and frequency. Climate change is expected to particularly affect the most vulnerable groups with the least adaptive capacity, which may exacerbate pre-existing inequities. Special adaptation measures will be proposed to minimize the risks to the most vulnerable population and to reduce poverty and marginalization, which are at the root of increased relative vulnerability.

✓ **Common but differentiated responsibilities**

All countries are responsible for climate change and variability, but some, the developed countries, have a greater historical responsibility, since they have contributed to a greater extent to the increase in the greenhouse effect. Therefore, they have a greater responsibility to mitigate and remedy this situation, as well as to support developing countries in their adaptation processes to impacts that they have not generated for the most part.

4.2 OBJECTIVES OF THE PLAN

The general objective of the National Climate Change Response Plan is to identify, plan and coordinate the actions and measures necessary to mitigate greenhouse gas emissions in Uruguay, as well as the actions necessary for the adaptation of society and the productive sectors to the impacts derived from climate change and variability.

The specific objectives are as follows:

1. Coordinate institutional actions for an effective and efficient response to the challenges of climate change.

2. To move towards integrated climate risk management supported by efficient information systems for decision making.

3. Improve knowledge on vulnerability to climate change scenarios and the demands for adaptation and mitigation of the different socio-economic and natural systems.

4. Establish preventive adaptation policies that help protect biodiversity and ecosystems and reduce the population's vulnerability to climate change.

5. Introduce adaptation and mitigation strategies in the productive sectors to reduce their vulnerability and promote environmentally sustainable economic development.

6. Promote climate change mitigation actions, taking advantage of the opportunities generated by the external framework for technology transfer, investment and access to the carbon market.

7. Stimulate the participation of key stakeholders in adaptation and mitigation actions through education, training and public awareness programs on climate change and its effects.

8. Contribute to the better positioning of the country in the negotiations under the UNFCCC and in the international policy arena in relation to aspects such as: trade implications of mitigation policies of third countries; access to international cooperation; technology transfer and financing of adaptation and mitigation.

V. STRATEGIC LINES OF ACTION

5.1 ADAPTATION

Adaptation to climate change is understood as the complex process of adjusting to expected trends in climate variables, either through explicit and planned interventions or spontaneously.

Adaptation is the most relevant line of action to respond effectively to climate change in Uruguay and seek to reduce risks and damages in the face of increasingly intense and threatening changes. Adaptation strategies can be anticipatory or reactive and could range from using water resources more efficiently to adapting building standards to future extreme weather conditions. They can be developed as a national or regional strategy; or they can be targeted at a particular sector or at several sectors as a whole.

The PNRCC aims at a comprehensive national strategy, emphasizing cross-cutting aspects that require adjustments and whose results are multivariate, affecting and benefiting several sectors simultaneously, while taking into account the particularities of each sector individually.

5.1.1 Integrated Risk Management

Risk Management is understood as a complex social process through which it is intended to achieve a reduction of existing risk levels and promote processes for the construction of new production and settlement opportunities in the territory under acceptable safety and sustainability conditions.

The National Climate Change Response Plan is oriented towards a cross-cutting and concurrent **risk management** approach, which complements sectoral and specific post-event **crisis management.** It promotes a form of management based on the planning of production opportunities and the organization of the way the territory is occupied by economic activities and the population, in such a way as to reduce the degree of exposure to climate risk.

The measures are organized in two (2) lines of action:

- Improving the capacity to respond to extreme weather events and variability.
- Instrumentation of insurance and funds for Climate Risk Coverage.

Improving the capacity to respond to extreme weather events and variability.

The foreseeable adverse impacts of more frequent and intense extreme weather and climate events demand a concerted solution of national scope that must be superior to the defense capabilities developed so far in terms of civil protection against this type of events. In particular, special consideration must be given to droughts, floods and severe winds, events that have very important negative consequences on society and ecosystems in our country.

The following measures are proposed:

- Adapt and strengthen the role of the National Emergency System as a public service whose mission is to coordinate public and private resources to better control situations of exposure to hazards. Gradually modify the management model from a vision that is based on attention to the catastrophe phases to a model of continuity, coordination and cooperation with a capacity for anticipation (promotion and prevention) and with standardized and contingent response plans.
- Develop Risk Management Plans for extreme events (floods, droughts, severe winds) that incorporate clear protocols for actions to be taken at different levels (local, regional, national) in the event of such events. Risk prevention strategies should be implemented, focusing and prioritizing actions to be developed in human groups, geographic areas or population centers with greater exposure to risk.
- Create local shelter networks to attend to the population that needs to be evacuated as a consequence of extreme weather events.
- Improve the Interinstitutional System for forest fire prevention and firefighting.
- Develop Early Warning Systems associated with the different sectors affected by climate change.

  The function of these systems is to support decision makers in forecasting and managing risk in the face of potential emergency situations. The development of the following specific systems is proposed:

  - Meteorological information and warning system for forecasting extreme weather events.
  - Forecasting and calibration monitoring systems for flood forecasting.
  - Multivariate early warning system for the risk of storm waves and flooding in the coastal zone.
  - Pest and Disease Alert System in the agricultural and forestry sector.
  - Alert system of the carrying capacity of ecosystems and modifications in the inter-specific relationships in habitats of particular interest.

- System of biological indicators of climate change impacts and definition of measurement protocols for an early warning system.

Instrumentation of insurance and funds for climate risk coverage

The intensity, frequency and increasing variability of extreme weather events have had strong impacts on different socio-economic sectors worldwide. In Uruguay there have already been consecutive events of extreme droughts and floods, with losses evaluated in hundreds of millions of dollars.

In view of this situation and in order to reduce the potential risks of indebtedness and decrease of investment in different sectors of the economy, as well as the worsening of the socio-economic conditions of the population that may be affected by this type of events, it is imperative to implement financial instruments to hedge risks derived from extreme weather events.

Special attention should be paid to those sectors that are most vulnerable to this type of event: Particularly the agricultural sector, sectors involving maintenance of strategic infrastructure (energy, water distribution and storage, transportation); and the population of lower economic resources, especially those located in high-risk areas.

The following measures are proposed:

- Create a state reinsurance fund to contribute to the comprehensive coverage of the most vulnerable socio-economic sectors, facilitating the development of insurance lines currently unavailable (due to their high risk without any reinsurance support).
- Establish a working group with public and private insurers to develop new lines of insurance related to climate risk adapted to the needs of the country's main productive sectors.
- To develop a line of research on the international financial services market in relation to the subject, in order to learn about the new instruments and business models available, as well as possible incentives and benefits related to the state policies adopted in order to reduce potential risks.
- Raise awareness in the most vulnerable productive sectors of the need to incorporate insurance as an instrument to reduce possible economic impacts, stabilize income, reduce vulnerability and uncertainty, and avoid ex-post reactions to the occurrence of adverse events.
- Incorporate the necessary information for estimating risk premiums and the resources needed to build and maintain the reinsurance fund in a sustainable manner as an integral part of the Climate Change Information and Monitoring System.

Annex 5

Annex 005

NATIONAL CLIMATE CHANGE POLICY

ORIENTAL REPUBLIC OF URUGUAY

National Environmental

System National Environmental

Cabinet

National System of Response to
Climate Change and Variability

National Climate Change Policy

Strategic and programmatic instrument prepared by the National System for Climate Change and Variability Response, adjusted and adopted with favorable opinion.
by the National Environmental Cabinet on April 27, 2017.

Oriental Republic of Uruguay

National Environmental

System National Environmental

Cabinet

National System of Response to Climate Change and Variability

(General objective and approach)

Paragraph 1:

The general objective of the National Climate Change Policy (hereinafter: Policy) is to promote adaptation and mitigation in the Oriental Republic of Uruguay (hereinafter: Uruguay) before the challenge of climate change.

The Policy should contribute to the sustainable development of the country, with a global perspective, intra- and intergenerational equity and human rights, seeking a more resilient society, less vulnerable, with greater capacity to adapt to climate change and variability, and more aware of and responsible for this challenge, promoting a low-carbon economy, based on environmentally, socially and economically sustainable production processes and services that incorporate knowledge and innovation.

The Policy has a time horizon of 2050 and foresees its development and implementation in the short, medium and long term, with the participation of the different actors of Uruguayan society.

Annex 6

Annex 006

MINISTERIO DE GANADERÍA
AGRICULTURE AND FISHERIES

MANUAL DE MANEJO DE BOSQUE NATIVO EN URUGUAY

Update

Yersion 2018

UPDATE OF THE NATIVE BUSH MANAGEMENT HANDBOOK IN URUGUAY

Version 2018

1. Introduction

In Uruguay, Forestry Law No. 15,939 prohibits logging and any operation that harms the native forest, with the exception of clearing perimeter fences or when the forest owner submits a management plan to the General Forestry Directorate for study and approval. For this purpose, there are instructions (for registration and native forest management plans) detailing the information that the technician must provide to the Directorate.

The native forest management manual needs to be updated to provide guidance to technicians. The manual includes the technical aspects to be followed in the design of the management plan, and technical recommendations to achieve sustainable management of the different types of forest.

The objective of this document is to suggest appropriate management practices for each type of forest in Uruguay in line with the national forestry policy.

The manual is not only for those who request a management plan, but it is also a tool for those producers who are interested in developing better practices for the sustainable use and/or conservation of the forest. The document provides inputs to producers and technicians to help them comply with the current legal framework, but it also helps producers to plan, organize and systematize their actions on the native forest.

Native forest management is understood as human intervention to improve the long-term composition, growth, and ecosystem functions of the native forest. Management may involve thinning, selective tree felling, stump cutting, pruning, crown lifting, stump cutting, stock thinning, wire fence cleaning, elimination and control of IAS. Through management, a balance is sought between the ecosystem functions of the native forest (soil protection, erosion, CO2 capture, water regulation, infiltration) and the economic interest (cattle ranching, firewood cutting) of the landowner and/or tenant.

In general, the cleaning of fences is permitted by the FGD, removing specimens of native species that have a very aggressive response to colonize free spaces, with insolation and affecting the fences, reducing their useful life. The opening or reopening is to improve the circulation of livestock and connectivity between patches of prairie. When clearing wire fences that function as a boundary with other people's land ("linderos"), the road must be executed on only one side of the fence. In some cases, isolated trees, specimens that do not constitute a forest mass, are cut down to grow forestry crops in the mountainous area of the eastern part of the country. This situation is considered when the area occupied by trees does not exceed 2,500 square meters (minimum area to be considered forest, according to Decree No. 452/988) and may also be due to landscape or tourism objectives.

The second chapter of this manual on native forest management in Uruguay presents a general characterization of the forests, the third chapter describes the types of forests that exist in Uruguay, the fourth chapter describes the country's legal framework and the strategy in force, and the fifth chapter introduces the steps for a management plan.

The sixth chapter **is the central one where management recommendations are made by forest type in different situations**, the seventh chapter presents a review of chemical control and the eighth and ninth chapters present a synthesis of degradation, restoration, rehabilitation and management of advances. The document ends with a chapter on the propagation of native trees.

Annex 7

Annex 007

PNA AGRO

National Plan for Adaptation to Climate Variability and Change for the Agricultural Sector in Uruguay

MINISTERIO DE GANADERÍA, AGRICULTURA Y PESCA
REPÚBLICA ORIENTAL DEL URUGUAY

SNRCC
Uruguay

Climate and agricultural production in Uruguay

Climate analysis and climate variability and change scenarios

Throughout history, the southeastern region of South America has alternated hot and cold periods and dry and wet phases.[52] On the other hand, in Uruguay the rainfall regime has maritime influences in the east and southeast of the country and a combination of maritime and continental characteristics in the rest of the territory. This results in two rainy seasons
-However, there is a very significant variation in the amount and distribution of rainfall from year to year.[54]

Based on historical records, over the last thirty years there has been an increase in the amount of rainfall, which is more marked in spring-summer. There is also an increase in the number of severe rainfall events, which in turn affects the southern region of Brazil.[55] When longer periods (sixty years) are analyzed, no statistically significant trends are detected.[56] However, Oyhantçabal[57] found a long-term trend in the decrease of the edaphic water deficit in the November-March period, both in terms of the mean and extreme events (90th percentile). This trend is associated with the water retention capacity of the soils and, therefore, is not uniform throughout the country.

The El Niño-Southern Oscillation (ENSO) cycle or El Niño phenomenon is one of the main sources of interannual variability. In Uruguay, the so-called "Niño years" normally present an increase in precipitation and the "Niña years" tend to be drier. The influence of ENSO cycles as a climatic forcing is more marked in the north and tends to weaken towards the south and southeast of the country.

The country's average maximum temperature is observed in summer (22.6 °C) and average minimum temperatures in winter (12.9 °C), with isotherms oriented from south to northeast. Based on historical temperature records, in

The analysis of the records also shows a lower frequency and duration of the agrometeorological frost period and a higher minimum temperature on days with frost.

The studies cited agree that an important part of the variation in Uruguay's climate is associated with inter-annual variability and is not ex- plicated by long-term trends associated with climate change. However, they point out that there could be a trend toward increasing inter-annual climate variability. For example, while precipitation is projected to increase, periodic water deficits are also observed, such as those that occurred in 2008/2009 and 2017/2018.

Climate projections

From the climatic records of Uruguay for the period 1931-2000, increases in precipitation are identified, mainly in spring and summer, with a decrease in the mean maximum temperature in summer. However, the highest temperatures recorded during the last 100 years have occurred in the last five years.[59] The analysis of these records also shows a shorter duration of the agrometeorological frost period. There are fewer frosts and the minimum temperature on the days when they occur is higher.

According to the Intergovernmental Panel on Climate Change (IPCC), since 1880 the average global temperature has risen by 0.85°C, while over the Earth's surface it has almost doubled. In its Fifth Assessment Report,[60] it shows that since the middle of the 20th century there have been

[52] Giménez, A.; Castaño, J. P.; Baethgen, W. E. and Lanfranco, B. (2009). *Climate change in Uruguay. Possible impacts and adaptation measures in the agricultural sector*. Montevideo: INIA.
[53] Bidegain, M.; Crisci, C.; Del Puerto, L.; Inda, H.; Mazzeo, N.; Taks, J. and Terra R. (2012). *Climate of change. New adaptation challenges in Uruguay. Volume I. Varia-climate vulnerability of importance for the productive sector*. Montevideo: MGAP-FAO.
[54] Castaño, J. P.; Giménez, A.; Ceroni, M.; Furest, J. and Aunchayna, R. (2011). *Agroclimatic characterization of Uruguay 1980-2009*. Montevideo: INIA.
[55] *Ibid.*
[56] Oyhantçabal, W. (2014). *Impacts of water déUcits on the troUc chain of e2tensive livestock ecozones in Uruguay*. Master's thesis in environmental sciences. Montevideo: Facultad de Ciencias-UDELAR.
[57] *Ibid*.
[58] Bidegain, M.; Crisci, C.; Del Puerto, L.; Inda, H.; Mazzeo, N.; Taks, J. and Terra R. *Op. cit.*
[59] Mori Teams (2013). *Climate of change. New adaptation challenges in Uruguay. Volume II. The perception of producers and agricultural technicians*. Montevideo: MGAP-FAO.
[60] IPCC (2014). *IPCC Fifth Assessment Report*. Available at: <https://bit.ly/2OrBeeO>.

changes in the frequency and intensity of extreme weather and climate events, and it is very likely that heat waves will occur more frequently and intensely, that extreme precipitation events will become more intense and frequent in many regions, and that this trend will accelerate along with changes in rainfall patterns and mean sea level, among others.

Climate projections and studies use models that represent the climate at a global level, called global circulation models (GCMs). There are numerous climate models developed by different institutions; however, due to their low resolution, they are not appropriate for estimating local pro- cesses. Moreover, GCMs are not accurate and those that perform better in one region may not be suitable for another. Likewise, the ability of the models differs according to the meteorological variable to be examined.

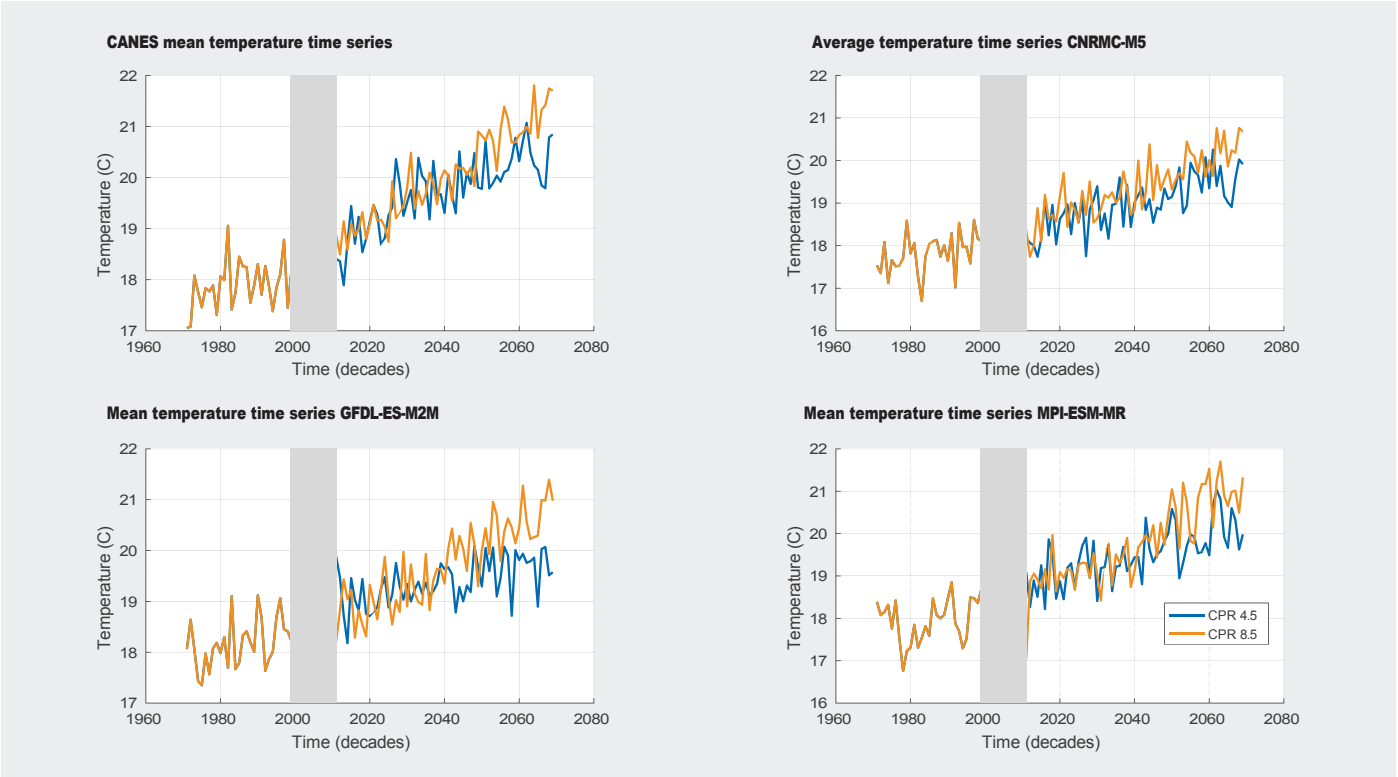
On the other hand, given that the evolution of greenhouse gas concentrations has been identified as the main driver of climate change, the IPCC has designed emission scenarios with variations associated with socioeconomic development and climate policy.

These scenarios are called representative concentration pathways (RCPs) and describe projections for greenhouse gas and aerosol emissions and concentrations and land uses over the century.

XXI. The RCPs model different levels of concentration evolution, from scenarios of strong emission reductions (RCP2.6), intermediate scenarios (RCP4.5 and RCP6.0) and a high emission scenario (RCP8.5). In all these scenarios, the projections result in an increase in temperatures, but differ significantly in magnitude.

In the process of preparing the NAP-Agro, a downscaling study was carried out for four global climate models[61] and two emissions scenarios (RCP4.5 and RCP8.5), by means of the statistical downscaling method and using the FAO MOSAICC platform.[62] The results of this study show projections with an increasing evolution of the three variables studied: precipitation, minimum temperature and maximum temperature. This result was independent of the reference scenario and the season (cold or warm), although different magnitudes of change were observed.

Time series of average temperature for the different scenarios.



Note: RCP4.5 is shown in light blue and 8.5 in orange, the gray band represents the period between the end of the historical simulations (year 2000) and the beginning of the RCP projections (year 2010).

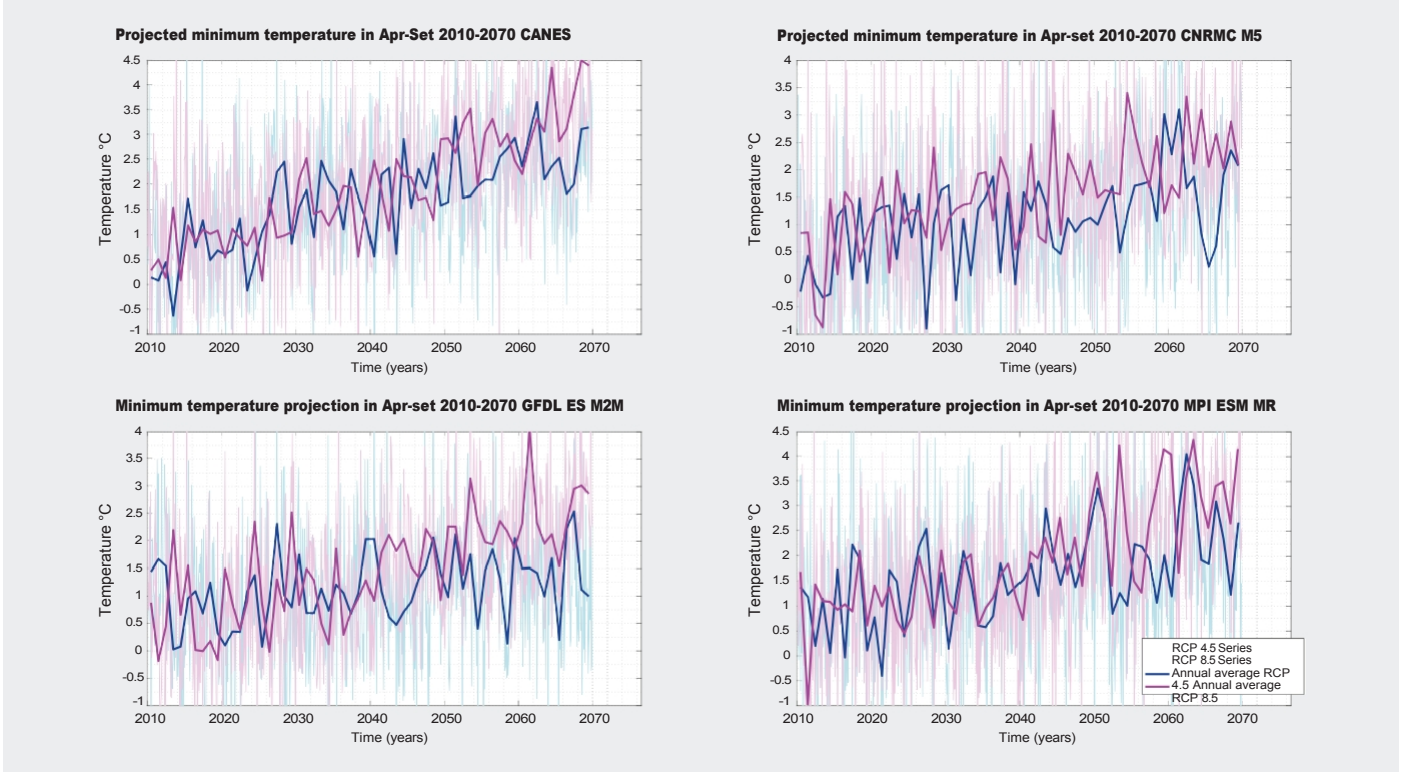
Source: Bentancur and Molinari (2019).

[61] The global climate models used in the analysis were: CMIP5-CANESM2, CMIP5-CNRM-CM5, CMIP5-GFDL-ESM2M and CMIP5-MPI-ESM-MR.

[62] Bentancur, V. and Molinari, M. (2019). *Climate projections using statistical downscaling for Uruguay*. Montevideo: PNA-Agro (MGAP-FAO-UNDP).

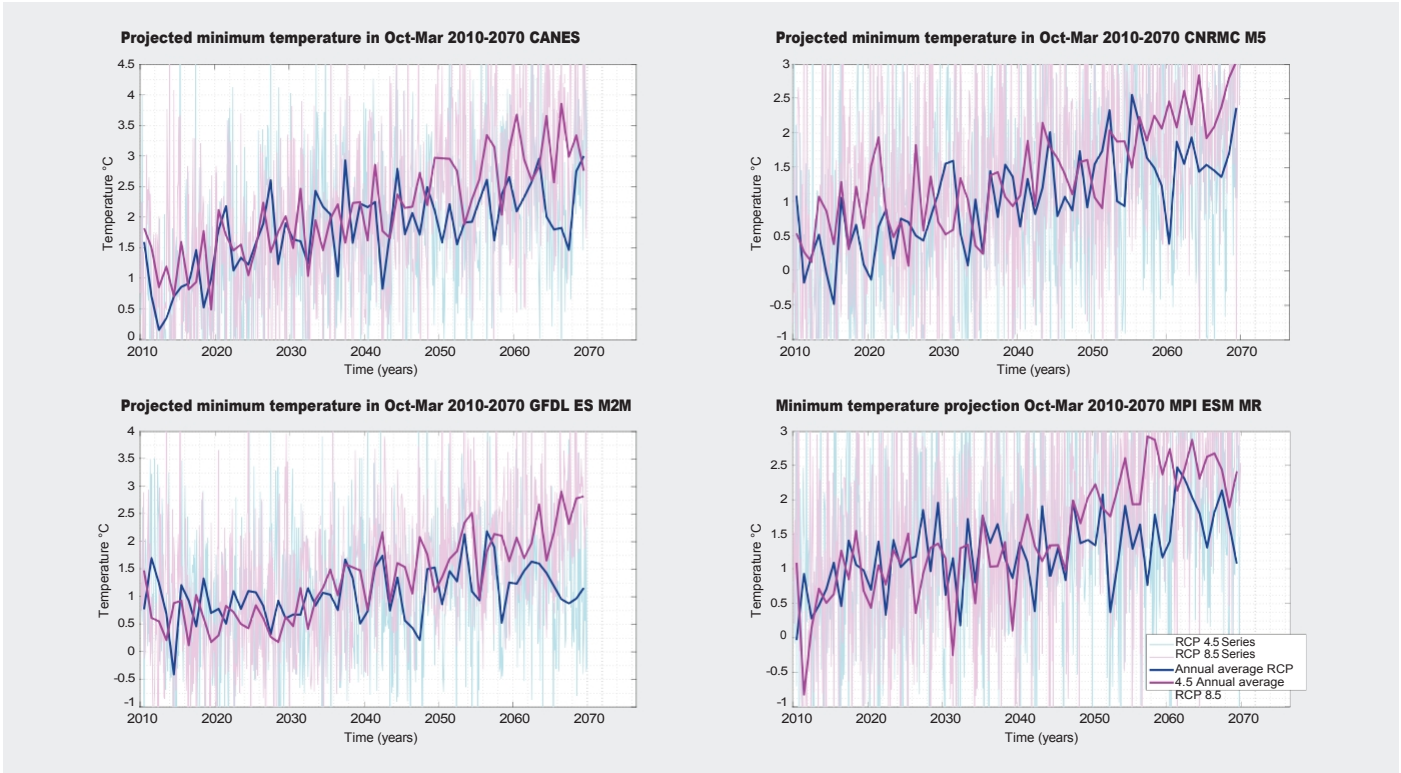
According to this study, the average temperature would increase between 1.5 °C and 3 °C in the period 2010-2070. For the maximum and minimum temperatures, on the other hand, a greater change was estimated for autumn-winter. On average, for the period 2010-2040, the increase in minimum temperature would be between 0.6 °C and 1.3 °C using RCP4.5 as a reference and between 0.8 °C and 1.5 °C for RCP8.5. For the period 2040- 2070, the minimum temperature increase was projected to be between 1.3 °C and 2.2 °C using RCP4.5 as a reference and between 2 and 2.7 °C for RCP8.5.

Figure 4. Evolution of minimum temperature in cold season



Source: Bentancur and Molinari (2019).

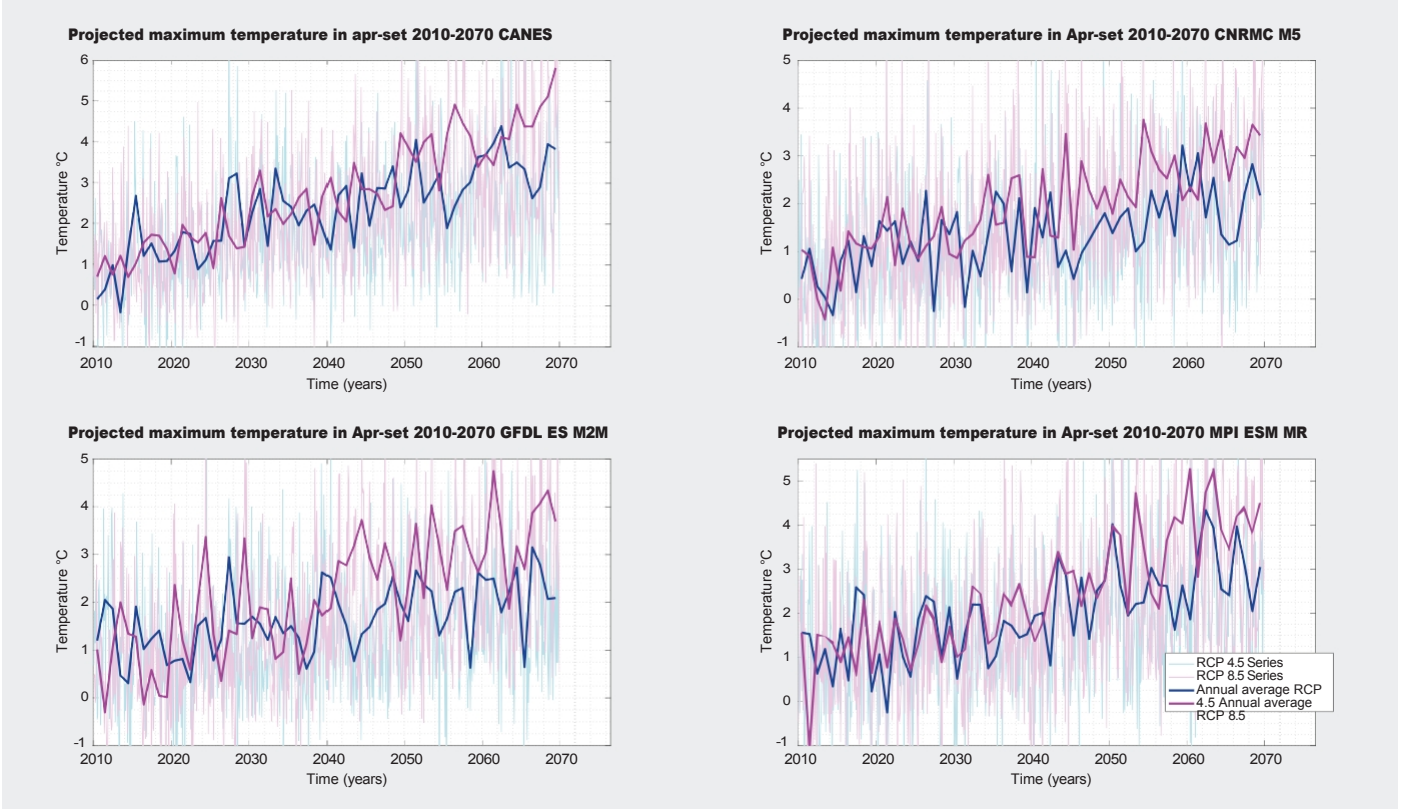
Figure 5. Evolution of the minimum temperature in the warm season



Source: Bentancur and Molinari (2019).

When the evolution of the maximum temperature was studied, the results showed between 0.9 °C and 1.5 °C increase using RCP4.5 as a reference and between 1 °C and 1.5 °C for RCP8.5. For the period 2040- 2070, the maximum temperature increase was projected to be between 1.6 °C and 2.4 °C using RCP4.5 as a reference and between 2.2 °C and 3 °C for RCP8.5. Over the entire period studied, the fall-winter thermal amplitude would appear to increase for both RCP4.5 and RCP8.5.

Figure 6. Evolution of the maximum temperature in the warm season



Note: In the same study, for the Uruguay region, a change in precipitation is projected that is greater in the spring-summer period. For spring-summer, the increase in the period 2010-2040 in both scenarios would be between 10% and 25%. For the period 2040-2070 and RCP4.5, an increase of between 15% and 35% is projected, while for RCP8.5 it would be between 20% and almost 40%. On the other hand, for autumn-winter, the increase in the period 2010-2040 for both RCPs is estimated to be between 5% and 10%, while for the period 2040-2070 and RCP4.5 an increase of between 10% and 25% is projected and for RCP8.5 an increase of between 25% and 30%.

Source: Bentancur and Molinari (2019).

In the analysis of extremes, we found an evolution toward a lower total number of days with frost. With respect to heat waves,[63] an increase in frequency was estimated, with the number of events doubling. With respect to the [water] deficit indicator,64 a decrease was observed during the period studied, more pronounced for autumn-winter. Studying precipitation events of more than 20 millimeters, no significant change was detected, but a clearer increase could be expected for the southern region than for the northern region. This trend is more pronounced in the cold season.

It is very important to be clear that as temperatures increase, the potential for adverse impacts on crop yields and animal productivity becomes more severe, while the risk of fire damage increases and water availability is reduced.

[63] Heat waves are defined as situations in which at least three consecutive days the maximum daytime temperature exceeds the expected mean by adding three times the standard deviation of the historical maximum temperature for that date.

[64] As an indicator, periods of low and very low accumulated monthly rainfall were estimated.

The impact of climate variability and change on agricultural production

According to the Intergovernmental Panel on Climate Change (IPCC, 2013), adaptation is defined as any adjustment in national or human systems in response to climatic stimuli or their effects, which moderates harm or exploits their potential benefits. This definition conceives adaptation as the process of intervention for adjustment to the current or expected climate and its effects.[65] On the other hand, Galarza and Von Hesse (2011)[66] argue that when climate change adaptation measures reduce the risks associated with climate events, they can be associated with the conceptual frameworks of risk management and disaster risk reduction objectives.

For the agricultural sector, adaptation means changing production processes or practices to moderate the potential impacts of climate change. These impacts also depend on interaction with social and environmental aspects and elements of the regulatory framework and national and sectoral policies.

One component of the adaptation of production systems is the incorporation of climate risk management into the decision-making process and the implementation of strategies to reduce the negative impacts of climate events. Climate risk management at the public policy level includes, among other aspects, information management, early warning, vulnerability analysis and risk monitoring systems. In this context, the quantification of damages and losses caused by climate impacts, especially extreme events, in the different production systems is key to identifying the requirements for recovery and prevention of climate risks.

Assessing the vulnerability of production systems to climate variability and change is an essential step in adaptation planning.

The assessment of the impact of climate variability and change on the agricultural sector faces several challenges, among them:

1. The agricultural sector is very diverse and the impacts of climate variability and change are multiple. Each production system is complex, both in terms of the biological processes inherent to production and the associated social, economic and ecological system.
2. Agricultural production is particularly sensitive to environmental conditions. Traditionally, there has been significant climatic vulnerability, resulting in production losses and variation in crop and pasture production. Strategies must take into account the deficit of adaptation to current climate variability and must also allow for adaptation to future changes, in a context of uncertainty. For this reason, the NAP-Agro proposes actions to address the challenges arising from both current climate variability and changes in climate.
3. The sources of climate information for understanding the present and projecting the future are limited. The inter-annual climate variability prevailing in Uruguay, together with the complexity of the agricultural sector, makes it difficult to analyze future scenarios and the impact of climate change on the sector.
4. There are sociocultural factors that act as constraints to adaptation, such as lack of risk management, resistance to innovation and risk aversion, and there are also structural constraints of the production units, such as land availability, which act as barriers to changes in production practices or technologies.

[65] IPCC (2013). "Glossary." In: *Climate Change 2013. Physical Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on E2perts on Climate Change*. Cambridge and New York: Cambridge University Press.

[66] Galarza, E. and Von Hesse, M. (2011). *Costs and beneUts of climate change adaptation in Latin America*. Lima: GIZ. Available at: <http://bit.ly/32nGPWa>

Uruguay's natural resources have allowed the development of its agricultural system and, in this context, climatic events are a determining factor that significantly varies productivity. The different agricultural production systems have different exposure to climate, due to a set of variables that include the regions of the country in which they are located and, in addition, they have different sensitivity and adaptive capacity. This is the result of the biological systems on which each system is based and also of the form of production, i.e., the practices and technology applied and the structural characteristics of the production unit.

The most important climatic events in terms of production risks are droughts, excessive rainfall, heat waves, frosts, storms, strong winds, hail and lack of cooling hours. However, as discussed below, the impact of these events differs for different production systems.

In 2009, INIA published a series of studies on climate change in Uruguay and its possible impacts and adaptation measures in the agricultural sector.[67] The survey shows how the observed or estimated changes in the climate variables studied impact the production of pastures, rice and rainfed crops. He points out that the inter-annual variability typical of Uruguay means that climate modeling and impacts on production must be considered over medium to long time frames for decision making or planning. It indicates possible variations in yield, depending on the crop, the GCM and scenario used, but also the likelihood of increased climatic conditions that favor diseases, such as those affecting wheat yield.

In 2013, the MGAP, with support from FAO, published the results of an in-depth review and analysis of the challenges of adapting the agricultural sector to climate change, as a result of the project New policies for the adaptation of the agricultural sector to climate change in Uruguay (TCP/URU/3302).[68] This publication, which compiles a series of studies carried out under the project, serves as a basis for the design of policies based on scientific evidence and provides fundamental elements for addressing the vulnerabilities of agricultural production.

On the other hand, the Adaptation Dialogues held by the NAP-Agro within the framework of its elaboration process served to identify and weigh impacts and challenges from the perspective of stakeholders in each production system.

[67] Giménez, A.; Castaño, J. P.; Baethgen, W. E. and Lanfranco, B. (2009). *Climate change in Uruguay. Possible impacts and adaptation measures in the agricultural sector*. Montevideo: INIA.

[68] MGAP-FAO (2013). *Climate change. New adaptation challenges in Uruguay. Volumes I to VII*. Montevideo: MGAP-FAO.

The vulnerability of livestock

In livestock farming, the event that has the greatest impact is drought[69] through its direct effect on productivity indicators such as calving and mortality rates or meat production per hectare and also through its impact on economic indicators resulting in lower net income per hectare and incremental animal feeding costs. The major direct impact of the lack of rainfall operates on forage production.

In the study on climate change in Uruguay and its impacts on pasture production published by INIA in 2009, it was pointed out that if in the long term a trend towards higher average temperatures and higher rainfall consolidates, this could result in greater pasture growth and higher dry matter production. However, the impact of these changes will depend on the characteristic variability of the climate in the region where Uruguay is located and also on potential changes in the botanical composition of pastures, especially in natural fields.

According to the Interdisciplinary Center for Response to Climate Variability and Change of the University of the Republic (CIRCVC-UDELAR), the sensitivity of livestock to drought is determined by the productive infrastructure, soil characteristics, the production system and the management of information and knowledge for decision-making. Livestock systems that manage fields with excessive stocking result in overgrazing and low aerial primary production of pastures and in very low productive and reproductive indicators.

below potential. Production systems with a natural field base managed according to their carrying capacity, i.e., with animal stocking adjusted to forage production, are less sensitive and have greater adaptive capacity in the face of lack of rainfall.

The consultations carried out for the preparation of the NAP-Agro coincide in pointing out that animal management and forage budgeting to manage climate risks would reduce the vulnerability of livestock producers to climate variability and the impact of climate change. At present, the impact of climate on forage production generates deficits for animal feed. In a likely scenario of increased climate variability, extreme events exacerbate the seasonality of pasture growth and associated livestock management challenges.

Estimates of damages and losses due to climatic events in livestock farming are complex because, in addition to the immediate impacts on animal mortality or the reduction in the calving rate and the loss of sown pastures, there may be reductions in production during the years following the event. On the other hand, in addition to the direct effects on livestock, there are indirect effects on the rest of the economy. For the 2008/2009 drought, OPYPA[70] estimated that direct livestock losses were in the order of US$340 million and estimated the aggregate effect, due to the link between livestock farming and other economic activities, at more than US$1 billion.

[69] Bartaburu, D.; Morales, H.; Dieguez, F.; Lizarralde, C.; Quiñones, A.; Pereira, M.; Molina, C.; Montes, E.; Modernel, P.; Taks, J.; De Torres, F.; Cobas, P.; Mondelli, M.; Terra, R.; Cruz, G.; Astigarraga, L. and Picasso, V. (2013). *Climate of change. New adaptation challenges in Uruguay. Volume III. Sensitivity and adaptive capacity of livestock in the face of climate change effects*. Montevideo: MGAP-FAO.

[70] Paolino C.; Methol M. and Quintans D. (2010). "Estimation of the impact of an eventual drought on national livestock and bases for the design of insurance policies". In: MGAP (2010). *Anuario OPYPA*. Montevideo: MGAP.

The vulnerability of the dairy industry

During the consultation process, the main problem identified was the strong impact of excess water on milk production, due to the difficulties it causes for animal feeding and pasture conservation, the increase in sanitary problems and difficulties in milking operations. In addition to the increased costs associated with the purchase of feed for the animals, excess water has a direct impact on the animals' milk production capacity. According to what was gathered during the Dairy Adaptation Dialogue, production losses during periods of excess water can exceed those that occur when there is a water deficit. As in the case of livestock, drought is a climatic event that greatly affects dairies. The effects are more marked on farms where the forage base is composed of annual grasses and high stocking rates.[71] Sensitivity to lack of rainfall is lower when forage production is based on a higher proportion of perennial grasses and lower stocking rates. Maintaining herd production during periods of low rainfall, when there is no surplus of forage reserves, generates an increase in feed costs that negatively impacts the herd's performance. on the economic result.[72]

The elements gathered during the Dairy Adaptation Dialogue indicate a certain consensus that, under Uruguayan conditions, an adaptation of the dairy industry to the new conditions of the country would

Dairy farming adapted to variability and climate change involves a system with a diet based on maximizing direct grazing of long-cycle pastures with strategic reserves of forage produced on the farm. An adapted dairy system includes infrastructure for shade and thermal conditioning of the cattle during the summer and roads and pavements that are capable of channeling intense rainfall.

The discussion added an emphasis on social and economic aspects. The strategy of adaptation to climate change in the livelihood production systems necessarily involves the dimension of environmental sustainability in the use and management of natural resources. The need for production systems to be able to attract young people was also identified. The need for financial instruments and funds to reduce the effect of price fluctuations and cost increases associated with the occurrence of extreme events was also emphasized, as well as the advisability of developing insurance coverage for climate risks to manage uncertainty and risk.

In the exchange, it was suggested that a good tool for managing weather-related uncertainty in dairy system planning would be the availability of medium-term forecasts presented in a format that contributes to decision-making on crops and forage.

[71] Astigarraga, L.; Cruz, G.; Caorsi, M. L.; Taks, J.; Cobas, P.; Mondelli, M. and Picasso, V. (2013). *Climate of change. New adaptation challenges in Uruguay. Volume IV. Sensitivity and adaptive capacity of the leckery in the face of climate change.* Montevideo: MGAP-FAO.

[72] *Ibid*.

According to the sensitivity and adaptive capacity analysis carried out by CIRCVC-UDELAR, the climatic events that cause the greatest losses for rainfed agriculture are droughts and droughts.[73] The consultations carried out during the process of preparing the NAP-Agro coincide in pointing out, for rainfed agriculture, water deficit and droughts as the causes of yield reduction in summer crops and excess water due to its effect on planting and harvesting operations, the incidence of pests and diseases and the loss of quality in winter crops.

The analysis of corn, soybean and wheat yields with the most important climatic variables in yield determination under ENSO oscillation shows that it is possible to reduce sensitivity and increase adaptive capacity in rainfed agriculture by using ENSO forecasts to adjust planting dates, cultivar choice and nitrogen fertilization strategy.[74] Crop diversification, the use of weather insurance, geographic diversification and irrigation are complementary strategies to reduce vulnerability.

Rice, which is grown under continuous flood irrigation for most of its cycle, has different challenges than rainfed agriculture. In years with rainfall deficits and, therefore, higher heliophany at critical stages of yield determination, higher production is observed in all cropping areas. In contrast, rainfall causes delays in land preparation, delays in planting and lower yields and grain quality due to deficiencies in daylight hours and temperature. When precipitation deficits occur in the winter season, water harvesting in irrigation reservoirs is reduced, which may lead to the decision to reduce the planting area.

The variables that influence the sensitivity of rice cultivation are not only related to climatic factors. Land and water tenure, the previous history of the farm, the area under cultivation and the planting and tillage systems used also affect the degree of vulnerability. The most sensitive producers with the least adaptive capacity are those with the smallest scale of production and those who rent land or water for irrigation, as they have higher operating costs and less margin for decision making.[75]

For both rainfed agriculture and irrigated rice, Giménez *et al.* (2009)[76] identified the risk of increased disease incidence. For example, the authors mention that there would be a higher risk of development of fusarium spike blight in wheat, based on modeled projections that indicate an increase in minimum mean temperature and precipitation in spring, which are the climatic conditions that favor the development of the pathogen. The implementation of breeding programs to incorporate genetic resistance is one strategy to reduce this risk.

In addition, for both types of crops, the strategic importance of having climate risk transfer tools was pointed out.

Crop impact projection

The results of the downscaling of climate scenarios carried out as part of the NAP-Agro construction process were used to assess the potential impacts of climate change on crop production. Using the MOSAICC platform, historical series of yields were taken, adjusted to remove variations not associated with climate (for example, the introduction of changes in production systems, such as irrigation and no-tillage), and correlations were analyzed with climatic variables (average, minimum and maximum temperature and rainfall) and water balance variables. From these correlations, a yield function was constructed that quantifies the relationship between adjusted yields and climatic and water balance variables. Finally, this yield function was applied to past and future climate data projected for the different global circulation models and climate scenarios. From the difference between the future and the past, an estimate of the expected change in crop productivity is obtained. For the study[77] we used historical yield series for soybean, rice, wheat, corn and potato. Applying the procedure described for the three climatic modes and the RCP4.5 and 8.5 scenarios, the anomalies in crop yields were measured.

[73] Mazzilli, S.; Bonilla, C.; Siri, G.; Arbeletche, P.; Rubio, V.; Bacigaluz, P.; Taks, J.; García, M.; Cobas, P.; Mondelli, M.; Cruz, G.; Astigarraga, L. and Picasso, V. (2013). *Climate of change. New adaptation challenges in Uruguay. Volume V. Sensitivity and adaptive capacity of rainfed agriculture and rice in the face of climate change*. Montevideo: MGAP-FAO.

[74] *Ibid*.

[75] *Ibid*.

[76] Giménez, A.; Castaño, J. P.; Baethgen, W. E. and Lanfranco, B. (2009). *Climate change in Uruguay. Possible impacts and adaptation measures in the agricultural sector*. Montevideo: INIA.

[77] Borges, M. *et al*. (2019). Personal communication.

at the national level and, when the series allowed, at the regional level. At the national level, the adjusted model for soybean and wheat does not allow detecting significant changes in yield for the GCMs and scenarios studied, with the exception of the CMIP5-MPI- ESM-MR model, which indicates a trend towards a negative impact of climate change on soybean yield in the distant future (2040-2069). In wheat, the analysis was applied to the data series of the INIA La Estanzuela rotation trials, in the department of Colonia, and in that case a significant trend towards lower yields in the distant future (2040-2069) was observed for all models and scenarios. In the case of rice, the analysis indicates a significant increase in yields in all combinations of GCM and RCP, both in the near future (2010-2039) and in the distant future (2040-2069). In general, the analysis by production regions (north, central and east) gave even more significant results than for the national analysis. For the potato crop, the data for the spring season did not give significant results, while in the fall season a significant negative effect of climate change on yield was observed for some combinations of GCM and CPR.

It should be noted that, in these analyses, in addition to the uncertainties inherent to GCMs and future climate scenarios, there is also the limiting factor in the availability of sufficiently long and dense georeferenced yield data series. In turn, the simplification of the models implies that they are based on few climatic variables and only on the water balance, and therefore do not take into account potential changes in other yield determinants, such as diseases and pests. However, the results give indications of possible impacts of climate change on the yield of the crops studied.

Crop damage and losses due to climate events

Table 10 shows the average annual loss and the maximum loss detected in the period 1978-2019 for the main crops, based on the comparison of harvest values with a moving baseline calculated as the average yield of the five years prior to the year of study. The estimated maximum loss illustrates the magnitude of the impact of extreme events in the period, which in the case of barley and soybeans is around 60% loss. In the case of rice, the maximum loss percentage is relatively low, reaching 17%, which is the result of the irrigation techniques applied for production, which avoid water restrictions for cultivation.[78]

[78] Hernández, C.; Methol, M. and Cortelezzi, A. (2018). *Guía de estimación de daños y pérdidas por eventos climáticos e2tremos en el sector agropecuario*. Montevideo: OPYPA. Available at: <http://bit.ly/2Lilyqy>.

Table 10. Average annual loss and maximum estimated loss due to climatic events. Period 1978-2019(*)

Cultivation	Average annual loss %	Average annual loss US$	Maximum loss %	Maximum loss US$
Soybeans	8,0	19.680.841	57,5	472.493.263
Corn	6,3	3.008.570	48,3	31.987.025
Sorghum	5,5	704.403	50,3	4.971.016
Rice	2,1	1.191.490	17,1	17.919.717
Wheat	6,8	7.323.292	52,3	132.505.493
Barley	7,2	2.880.877	59,0	33.987.511

(*)Includes losses due to lower yields and less harvested area. Data expressed as a percentage of the baseline.

Source: Hernandez *et al*. (2018) based on data from DIEA-MGAP and CMPP.

When analyzing losses due to climatic events over time in the main extensive crops, it becomes evident that the area sown is a determining factor in the exposure of the systems to the climate. For example, although the droughts of 1988 and 1999 affected yields per hectare of rainfed crops, the economic impacts were relatively minor due to the smaller area sown compared to the present (Graph 3). Thus, the increased exposure to climatic events due to the increase in cultivated area is an important factor in explaining the increase in physical and economic losses in agriculture in recent years.

In the 2012/2013 crop year, the largest losses due to the

The lowest yields were in wheat due to excess water in critical periods for yield determination and accounted for 80% (US$132.5 million) of total losses in the cereal and industrial crop production sector. In the 2015/2016 crop year, soybean losses due to water deficit accounted for 95% of total losses (US$153 million).

The drought that occurred during the 2017/2018 harvest caused the highest physical and economic losses at the country level in the period. The magnitude of the impact responded to several aspects. First, the increase in the area dedicated to this crop in the last decade determined a greater exposure to the climate. On the other hand, drought conditions occurred with greater intensity during February and early March, which is the period in which the soybean crop is most vulnerable to lack of water. In addition, one of the areas with the greatest water deficit was the coast of the Uruguay River, which is where the largest soybean planting area is located. Another factor that, according to the

In the opinion of experts, the trend towards a greater concentration of planting time contributed to the increased exposure of soybeans, an aspect that would be linked to the application of a more adjusted technology and a larger fleet of machinery that facilitates the use of tillage and sewing opportunities. In the 2017/2018 harvest, losses due to lower soybean crop yields accounted for 85% of total losses (US$445 million).

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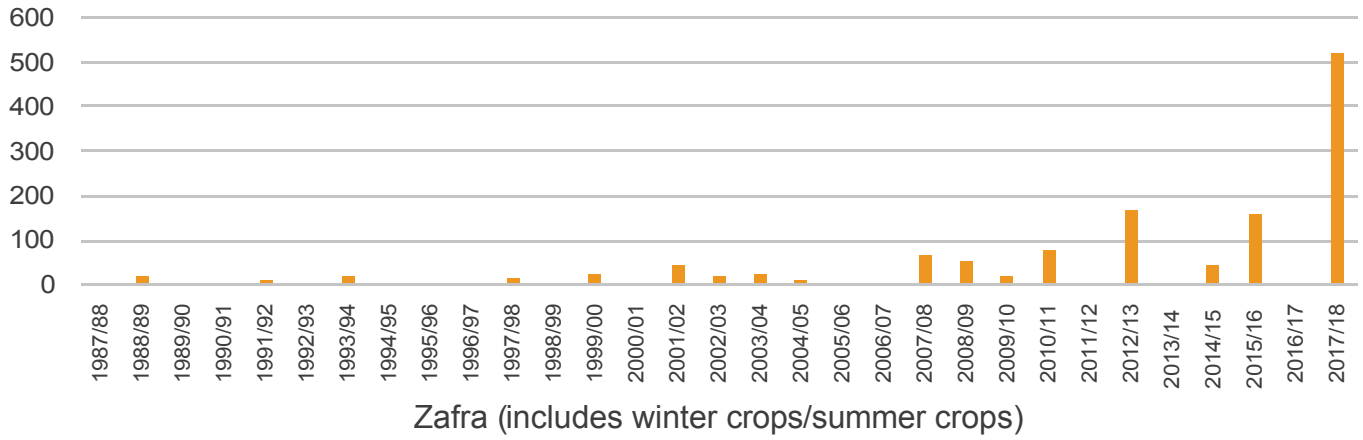
Losses due to lower yields associated with climatic events in the main crops. In millions of dollars



Note: Includes soybeans, corn, sorghum, rice, wheat and barley.

Source: Hernandez, Methol and Cortelezzi (2018) based on data from DIEA-MGAP, INIA-GRAS and CMPP.

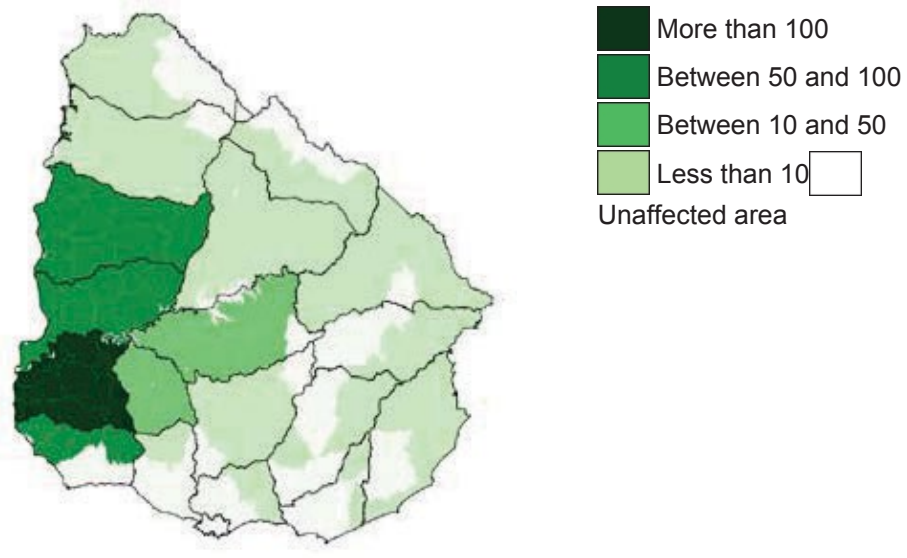
In the 2017/2018 harvest, losses due to lower soybean crop yields accounted for 85% of total losses (US$445 million).

Climatic events and the degree of exposure rarely have a uniform geographic distribution. For this reason, it is of interest not only to study economic and physical losses at the national level, but also to analyze their geographic distribution. Using maps of available water in the soil and crop water balance prepared by INIA-GRAS together with data on the distribution of sown and planted areas, it is of interest not only to study the economic and physical losses at the national level, but also to analyze their geographic distribution.

yields by department from DGRN and DIEA, it was possible to estimate the loss by department during the 2018/2019 harvest (Figure 7).

In this regard, Figure 7 shows the difference in economic losses due to lower soybean yields among the departments that experienced drought conditions in the 2017/2018 harvest. About 35% of the losses were concentrated in Soriano, and together the departments of Soriano, Paysandú, Río Negro and Colonia accounted for about 75% of the total losses.

Distribution of economic losses by department due to lower soybean yields. Drought 2017-2018. In millions of dollars



Source: Hernandez, Methol and Cortelezzi (2018) based on data from DIEA-MGAP, INIA-GRAS and CMPP.

The vulnerability of forest production

There are no local studies on the sensitivity of forestry to climate change. However, in the discussion promoted by the NAP-Agro on the vulnerabilities of this production system, the risks associated with different climatic events were identified. The effects of drought conditions on forestry production result in an increase in diseases and pests associated with the increase in average temperature and water stress in the forests.

The effects of excessive water due to abundant rainfall have a combination of effects with economic and productive consequences. Excessive water due to abundant rainfall causes a combination of effects with economic and productive consequences. In particular, loss of production as a result of health problems and labor and logistical difficulties combined with problems of erosion in the plantations were mentioned.

The vulnerability of fruit and vegetable production

For horticultural production, there are no local studies on sensitivity to climate variability and change. However, during the consultation activities for the preparation of the NAP-Agro, differences were identified according to the technologies and practices used for production. In this regard, crops grown in the open and without irrigation are more sensitive to the lack and excess of rainfall and to agrometeorological frosts. Protected crops are more sensitive to extreme events, as these, in addition to causing crop loss, also lead to losses in infrastructure investments, such as in- vernaculars. The small scale of production units is a factor that increases sensitivity and reduces adaptive capacity, particularly in family producers.

Horticulture in Uruguay is mainly located in the north and south of the country. During the Adaptation Dialogues held as part of the construction of the NAP-Agro, it was pointed out that, considering the climate projections that indicate a lower incidence of frost and higher temperatures, it is possible that the comparative advantages of horticulture in the north of the country, which currently manages to produce and reach the market earlier than in the south of the country, could be considerably reduced. This would cause losses in competitiveness that would result in greater vulnerability.

The main risks for horticultural production are hail storms and windstorms, excessive rainfall, heavy or unseasonable frosts and insufficient winter cold, which affects deciduous fruit trees and other fruit trees, such as olives, to a greater extent. Damage and losses due to climatic events in this production system are manifested through the impact on yields, harvested area and product quality, and also through damage to protection or support infrastructures.

In addition, in the case of biennial or perennial species, the impact of a climatic event can last for more than one production cycle.

As part of the work to standardize the estimation and recording of damages and losses due to climatic events carried out during the process of preparing the NAP-Agro, losses in fruit and potato production were calculated for the period 2008-2018. Table 11 shows the results from the comparison of crop yield values with a moving baseline calculated as the average yield of the five years prior to the year of study. While these data are national and may show the combined effect of several climatic events in a given year, they allow us to see the range of maximum losses for the different crops.

Analysis of existing information on deciduous fruit tree production indicates that climate is a determining factor in the production of apples, pears and peaches, particularly because of the need to accumulate sufficient chilling hours in winter for bud induction. A lower occurrence of winter chilling results in poor poration, deformation of pores and lower fruit yield. On the other hand, excess rainfall in spring increases the incidence of diseases that affect yield and fruit quality. In the case of duraznero, excess rainfall can cause plant death due to root asphyxia.[79]

Storms with wind and hail also have a significant impact on the

The availability of hail insurance is identified as a suitable tool to manage the risk of these events in fruit growing. The availability of hail insurance is identified as a suitable tool to manage the risk of these events in fruit growing.

On the other hand, the increase in temperature linked to climate change could be associated with an increase in the incidence of pest damage, although the scientific evidence is not yet conclusive on this issue.

[78] Ferrer, M.; Camussi, G.; Fourment, M.; Varela, V.; Pereyra, G.; Taks, J., Contreras, S.; Cobas, P.; Mondelli, M.; Cruz, G.; Astigarraga, L. and Picasso, V. (2013). *Clima de cam- bios. New adaptation challenges in Uruguay. Volume VI. Sensitivity and adaptive capacity of viticulture and fruit growing in the face of climate change.* Montevideo: MGAP-FAO.

Table 11. Average annual loss and maximum loss due to climatic events in fruit and potato crops for the period 2008-2018. Data expressed as a percentage of the baseline.

Cultivation	Average annual loss	Maximum loss
Orange	8,5	25,4
Mandarin	4,9	16,5
Lemon	5,5	19,6
Grapefruit	29,7	59,2
Apple	12,1	29,2
Pear	19,9	58,9
Peach	3,3	16,5
Nectarine	5,3	18,3
Plum	13,9	45,7
Quince	10,9	45,1
Autumn Pope	3,8	20,4
Spring potato	4,2	15,5

Source: Hernandez, Methol and Cortelezzi (2018) based on data from DIEA-MGAP, INIA-GRAS and CMPP.

In fruit growing, as in other production systems, sensitivity and adaptive capacity are strongly associated with the type of crop, varieties and scale of the production unit. In general, climate risk management implies an increase in production costs that sometimes compromises profitability, but if adequately designed, this increase should not compromise the profitability of production units.

In viticulture, in addition to the direct effects of climate on production and yield, the linkage of these effects with the winemaking process was identified as a relevant factor when analyzing its vulnerability. The effect of excessive rainfall on health also causes changes in grape composition. The same happens with the occurrence of high temperatures during the summer, particularly at night, which induce changes in the ripening and acidity of the fruit with effects on the quality of the wines.

In order to increase the adaptive capacity of the wine value chain, the need to generate research on changes in winemaking techniques is highlighted. and in the winemaking process, and to promote climate insurance as a risk transfer instrument.

During the consultations for the preparation of the NAP-Agro, there was agreement on prioritizing the construction of sustainable production systems and the development of infrastructure standards adapted to climate change. The strategic importance of developing agro-climatic information systems at local scales to enable producers to take measures to reduce the effects of climate events and to continue strengthening tools for integrated pest and disease management was emphasized. Although climate insurance was positively valued as a climate risk management tool, it was pointed out that the scope and coverage of available insurance is currently insufficient. The importance of promoting the participation of producers in the value chain to strengthen their livelihoods and mitigate the vulnerability associated with variations in the supply of products due to climatic factors was also identified.

The vulnerability of artisanal fisheries

De Feo *et al.*[80] conducted a database analysis showing that there are significant effects on fish catch due to changes in climate. These effects are a consequence of the combination of global climate change and human activities resulting in overexploitation of fishery resources.

In particular, sea surface temperature anomalies, wind intensity and sea level rise are factors that affect oceanographic systems. By studying the impact of these factors at the regional level, the authors conclude that it varies according to the life cycle and distribution of the target species. One example is clams, which are particularly susceptible to climate variations because of their limited capacity for movement. Their exploitation is being increasingly restricted due to the accumulation of toxins associated with algal blooms that make them unsuitable for human consumption.[81]

Some of the proposals made during the consultation for the preparation of the NPA-Agro were the strengthening of the artisanal fisheries governance system and the updating of regulations for management that incorporates innovations in the type of vessels and fishing gear and to diversify uses (including sport fishing, for example).

During the Artisanal Fisheries Adaptation Dialogue, the need for integrated fisheries management that prioritizes the sustainable use of fishery resources and avoids overexploitation was highlighted. Land use by agriculture and cities was also identified as one of the factors that have the greatest impact on coastal areas and make ocean and inland water fishermen more vulnerable.

The development of coordinated research programs, with the participation of academia, the State and fishermen's representatives, was identified as key to exploring new opportunities with commercial value associated with changes in the distribution of species and also to develop productive alternatives that respond to climate challenges.

To reduce risks and uncertainty, the need to develop communication and information products with easily accessible local climate warnings, accompanied by insurance and support funds for climate events was indicated. The development of value-added systems and direct marketing was identified as a strategy to strengthen livelihoods and contribute to making artisanal fishers less vulnerable to climate change.

[80] Defeo, O.; Castrejón, M; Ortega, L.; Kuhn, A. M.; Gutiérrez, N. L. and Castilla, J. C. (2013). "Impacts of climate variability on Latin American small-scale fisheries". *Ecology and Society*, 18(4), p. 30.

[81] Defeo, O.; Castrejón, M; Ortega, L.; Kuhn, A. M. and De Álava, A. (2014). "Climate variability and its impact on small-scale invertebrate fisheries in Latin Amé- rica". *Desenvolvimento e Meio Ambiente*. 32, pp. 29-39.

Family production

Different production systems have different degrees of sensitivity and exposure to climate, which make them more or less vulnerable. However, what was exchanged in the Adaptation Dialogue, which specifically involved family producers from different production systems, makes it possible to affirm that climate vulnerability in all of them has a marked social dimension. The effect of climatic events on production systems is manifested in family difficulties due to lack of income and loss of quality of life for the family.

In general terms, the vision expressed during the dialogue is that in order to achieve adaptation of family farming to climate variability and change, it is necessary to build production systems that are less vulnerable to climate and that contribute to the sustainable use of natural resources. It was pointed out that this could be achieved by developing research and strengthening the system for disseminating techniques and knowledge that incorporate climate risk management and improve the adaptive capacity of family production systems.

In family livestock systems, the adaptation of animal and natural field management and the use of strategic forage reserves, together with the incorporation of water management strategies for crops and animals, are proposals to eliminate production limitations and reduce the uncertainty derived from climate variability.

During the dialogue, it was pointed out that access to information and its use contribute to reducing uncertainty in decision-making. In this regard, it was proposed to develop and strengthen agro-climatic information systems that contribute to the planning of production units, as well as to generate tools to support pro- ductive decision-making.

Adverse weather events have a negative impact on the household economy and that of production units. The participants in the dialogue identified the need to continue developing climate insurance, within the framework of public policies, as climate risk management tools that contribute to reducing vulnerability and cushioning the effect of climate events on production units and families.

Another aspect that emerged during the dialogue is that organized producers have a greater capacity to adapt than those who are not associated.

In this sense, strengthening producer organizations and the formation of groups is identified as a fundamental pillar of adaptation strategies for family farming.

Another proposal to strengthen the adaptation of family systems was the implementation of measures to promote the participation and influence of women in productive decision-making, in order to address the differences between men and women in the perception of climate risks and impacts associated with climate variability and change.

The Dialogue on Adaptation in agriculture made it possible to identify objectives that cut across the production systems for the preparation of the NAPAgro. In general, there is marked agreement on the need to build adapted production systems, climate risk management tools, dissemination, training and extension systems, and climate information management systems and tools. It is necessary to integrate these objectives with those arising from the Adaptation Dialogues carried out by production system.

Rural women

Within the MGAP, there is an explicit policy to address institutional strategies with a gender perspective, aligned with the National Strategy for Gender Equality 2030.[82] The latter is a roadmap for incorporating actions aimed at reducing gender gaps through inclusive policies, which also explicitly addresses action for adaptation to climate change. Moreover, Uruguay has made a commitment to the issue, derived from SDG 5 of the 2030 Agenda, the FAO Global Strategy for Improving Agricultural and Rural Statistics and the 2020 Round of Agricultural Censuses worldwide.

One of the nine Adaptation Dialogues carried out as part of the preparation of the NAP-Agro brought together rural women who work in dairy, livestock and horticultural production systems in different regions of Uru- guay. The elements gathered during the activity indicate that they clearly perceive the importance and impact of climate variability and change on their farms and visualize the effects of climate on their daily lives.

In this context, they expressed their interest in training and learning about best practices to strengthen

[82] National Gender Council. *National Strategy for Gender Equality 2030*. Available at: <https://bit.ly/2LTGwOb>.

their ability to adapt. In particular, the participants expressed difficulties in coping with the uncertainty of weather and seasonal conditions.

In relation to women's participation in decision-making for the adoption of new techniques or strategies for adaptation to climate change, the intersection of gender and generational issues became visible. In this sense, the participants recognized the exclusion of younger generations in decision-making, especially when they propose new ways of doing things. Within the framework of their family dynamics, women and younger members tend to behave as agents of change, energizing decisions that involve the incorporation of innovation.

For the preparation of the NAP-Agro, it was considered decisive to generate evidence to incorporate the gender perspective in the design of the Plan. To this end, research was carried out using quantitative and qualitative methodologies, focusing on family and medium-scale dairy, livestock and horticultural establishments. The results of the survey applied in the first stage of the Plan

The quantitative data from the study[83] indicate that climate-related issues are among the main concerns of the women consulted.

In this sense, awareness and sensitivity to the risks associated with increasing climate variability exist and are the necessary basis for building a culture of adaptation aimed at improving response capacity.

The data show the need to disseminate and train in general knowledge on the subject and specific knowledge on possible adaptation actions. In this sense, although most of the producers who participated in the survey are aware of the concept of climate change, more than half do not know or do not remember any adaptation measures to face the perceived changes in the climate and do not mention having implemented measures. Only if the question is leading, the group of those who did not take any action is reduced, which means that adaptation actions exist but are not visualized as such.

On the other hand, only 19% of those surveyed plan to implement new adaptation measures in the future. Within the group of the population that did not incorporate any measures, or did so in minimal amounts, the proportion is even lower (11%). This situation points to the need to generate an offer not only of training on specific contents, but also of workshops or other communicational strategies to promote the learning of climate risk management strategies.

[83] Bernheim, R. (2018). "Climate Change Adaptation Strategies and Gender. Study for the National Plan for Adaptation to Climate Variability and Change for the Agricultural Sector." In MGAP (2018), *Anuario OPYPA*. Montevideo: MGAP, pp. 615-629. Available at: <https://bit.ly/2OpSocH>.

Regarding the implementation of actions, the survey data show that the attitude towards the adoption of adaptation measures is more favorable in farms where registers are used (compared to those where they are not), where the informant participates more in farm decisions (compared to those where she does not participate or participates less) and in households where at least one member has a high level of education (technical, tertiary or university, complete or incomplete). In addition, participation in MGAP programs, contact with technicians, participation in agricultural associations and organizations, and attendance at training courses or workshops increase the inclination to implement adaptation measures. In households with these characteristics, a greater number of adaptation measures were taken and, in turn, these were also mentioned spontaneously to a greater extent.

However, it is also found that there is a greater number of adaptation measures implemented on farms with a higher socioeconomic level, measured by the possession of goods and services. On farms that have a vehicle (car, van or motorcycle) and an Internet connection, there are also elements linked to the autonomy of the informants, since the number of measures adopted tends to be greater when these goods are used by the informants.

On the other hand, a significant percentage of participants in the survey stated that the possibility of incorporating new measures was evaluated in their establishment, but were discarded due to lack of economic and financial resources.

More than half of the answers given by the informants to explain their low or non-existent participation, both in the area of decisions related to the farm and in agricultural organizations and training, are built around exclusions derived from gender identity and roles. In turn, many of the informants, especially those who state that they are not interested in having greater participation in decisions, do not visualize the possibility of introducing changes in the farms.

In the cases of the women surveyed who do not participate in groups and trainings, the reasons associated with the absence of other women in the area and the difficulties and costs of transportation are highlighted. The importance of these links for the creation of adaptive capacities emerges in different indicators of the study.

Among them is the fact that, if we consider the number of measures adopted as a result, cooperatives and development societies are as efficient means of information on adaptation measures as the advice of technicians or professional institutions in the field. In this sense, training and awareness-raising programs need to have resources to consider these distances and seek solutions that bring the offer closer to the target public or to generate alternative forms of participation, since the most isolated population tends to be the most vulnerable.

The answers to different questions that surveyed the use of information sources show that the Internet, radio and direct links with other individuals and groups are the most frequent means of access. Likewise, the cell phone, through applications, is a new consultation tool compared to previous studies.

With regard to the sexual distribution of work in the establishments, there is an unequal assignment of activities that overburdens the women in the families. This inequality is based on their majority participation, in comparison with men, in domestic productive activities, as well as on their variable participation in the sphere of activities associated with the countryside and, traditionally, with the figure of the male. The latter association keeps the contribution of women in these spaces invisible.

Dairy farms, where the greatest number of adaptation measures incorporated are obtained, simultaneously show the highest rate of women's participation in extensive productive activities and the greatest inequality in the distribution of domestic work. This suggests that the efforts involved in the incorporation of adaptation actions in this productive system could be based on the work contributed by women.

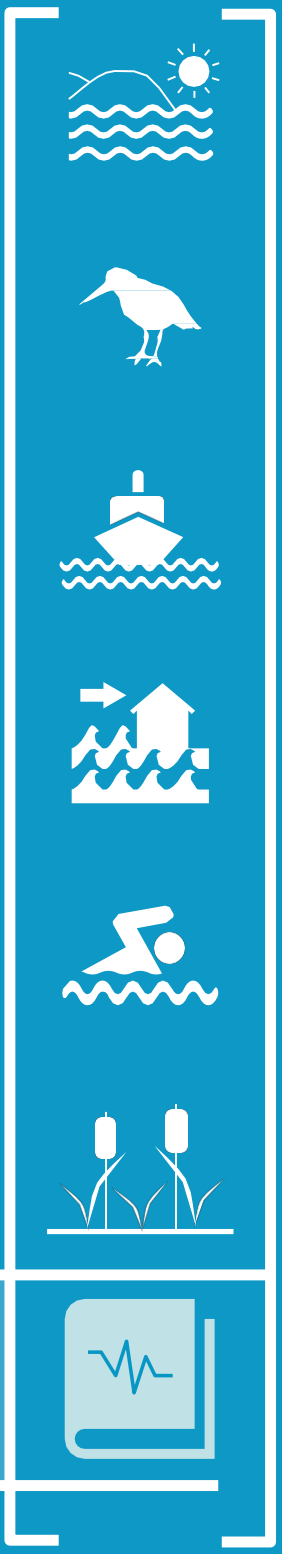
In all production systems, the participation of women in remunerated activities outside the formal sector decreases their participation rate in production and marketing decisions. In the case of dairy farming is where it decreases most noticeably.

Regarding generational replacement, 42% of the respondents do not visualize a project for the transfer and continuity of the establishment, which may be another factor that, by limiting future projection, also limits the implementation of adaptation measures.

Annex 8

NAP Costas

National Coastal Adaptation Plan of Uruguay



Preparatory document

Climate variability and change in Uruguay. Training material for technicians of National Institutions.

MVOTMA
Ministerio de Vivienda Ordenamiento Territorial y Medio Ambiente

SNRCC
Uruguay

Climate Variability and Change in Uruguay

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Material for Training of Technicians in National Institutions MVOTMA-

UdelaR Agreement UNDP-URU/16/G34 Project UNDP-URU/16/G34

October 2O19

Introduction to the climate system

The climate system is made up of the continents, oceans, atmosphere, cryosphere and biosphere, components between which there is a continuous flow of energy and mass. Thus, the climate system is a machine that converts and distributes the energy it receives from the sun, which is about 24O W/m^2 .

All components evolve at different rates, or have characteristic time scales, but any perturbation in one of them has repercussions on the others, which respond at their own pace. Therefore, the climate system has variability on all time scales, from seconds to millions of years.

Due to the complexity of the climate system and on the basis of response times it is convenient to consider a hierarchy of components, taking first the components with the fastest response times so that the other components are considered part of the external system. For example for the scale of hours to days the atmosphere can be considered as the only internal component of the climate system (S=A), with the oceans, ice, continent and biosphere considered as external forcing or boundary conditions. For scales of weeks to decades the internal climate system must consider the ocean, snow cover and part of the biosphere (S=A+O). For the study of climate variability beyond hundreds of years the entire cryosphere and biosphere must be included (S=A+O+B+C) and the lithosphere is considered as an external forcing.

Even under conditions of constant external forcing the internal climate system is always subject to randome fluctuations in time and space. If we consider the traditional case of taking the atmosphere as the internal system (S=A) we can define climate in terms of the state of the atmosphere (mean and variance) together with the mean conditions of the oceans, cryosphere, continents and other external forcing. Therefore, in this case to define the state of the climate it is necessary to average over a time interval that must at least exceed the synoptic scale (5 to 7 days). We can thus define the state of the climate for a season of the year, a decade, etc. The standard average to consider 3O years (World Meteorological Organization definition) is a particular case for the atmosphere.

For a different set of external conditions we can obtain a different climate state and we can define climate change as the difference between two climate states of the same type, e.g., the difference between two winters, two decades, etc. This difference must include changes in mean and variance. A climate anomaly can then be defined as the deviation of a particular climate state for a given time interval from the set of possible states.

The Earth's climate has varied significantly and continuously on time scales from years, to glacial periods, and longer (Figure 2). Climate variability has two components:

- forcing variations, which are the response of the climate system to changes in the external forcings
- free or internal variations due to inherent instabilities and feedbacks that give rise to nonlinear interactions between the various components of the climate system.

External causes include astronomical and terrestrial forcing. Among the astronomical ones are (a) changes in solar intensity, (b) changes in orbital parameters (eccentricity of the orbit, precession of the equinoxes and obliquity), (c) changes in the Earth's rotation rate. Among the terrestrial ones are (d) variations in atmospheric composition due to volcanic eruptions and human activities, (e) variations in land cover (deforestation, desertification, etc.), (f) tectonic movements. Examples of forced variability are the daily cycle and the annual cycle.

Internal causes are associated with positive and negative feedback mechanisms and other strong interactions between the components of the climate system. These processes can give rise to instabilities and oscillations in the system. An example of internal variability is the daily variation of weather due to the passage of atmospheric disturbances such as fronts.

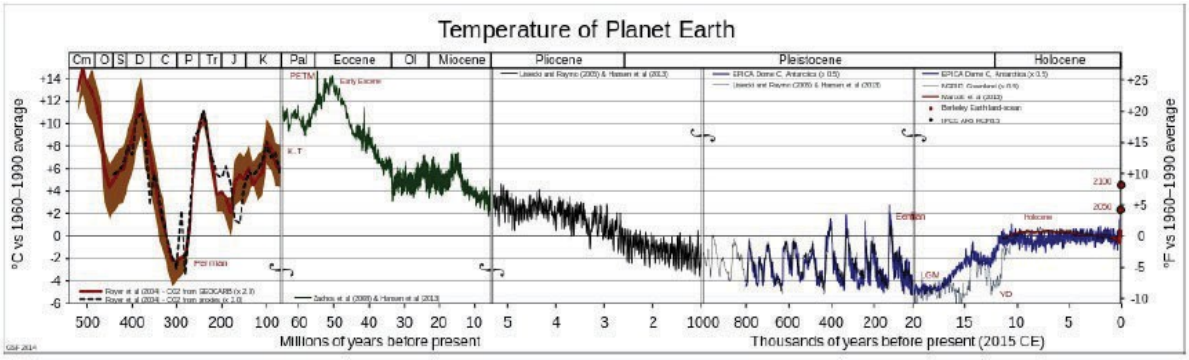


Figure 1 - Evolution of the Earth's average temperature. Source: Wikipedia.

4. Atmospheric circulation

As we saw earlier, the atmosphere has to be set in motion to transport energy from the tropics to the poles. How does it do this?

4.1 Tropical region

As the equatorial region receives a lot of energy, the surface is warm and the warm, moist air rises. As the air rises, it cools and condenses, forming clouds and heavy rain. At altitude (about 12 km) the air begins to move towards the poles in each hemisphere descending between 1O and 3O °, returning to the surface towards the equatorial region. This movement is called a Hadley cell and a schematic is shown in Figure 3. The surface winds are called trade winds and the region of intense rainfall located between the two Hadley cells is called the Intertropical Convergence Zone.

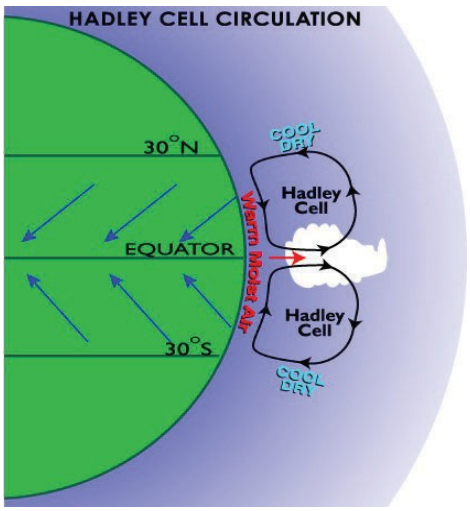


Figure 3 - Schematic diagram of Hadley cell. Source: www.windows2universe.org.

As a result, surface low pressure belts exist in the equatorial region and high pressure in the subtropical regions of both hemispheres. The high pressure maxima located over the oceans are called semi-permanent anticyclones of the South Atlantic, North Atlantic, South Pacific, North Pacific and Indian Ocean. At the extratropical margin of the high pressure maxima there are westerly winds in both hemispheres (Figure 4).

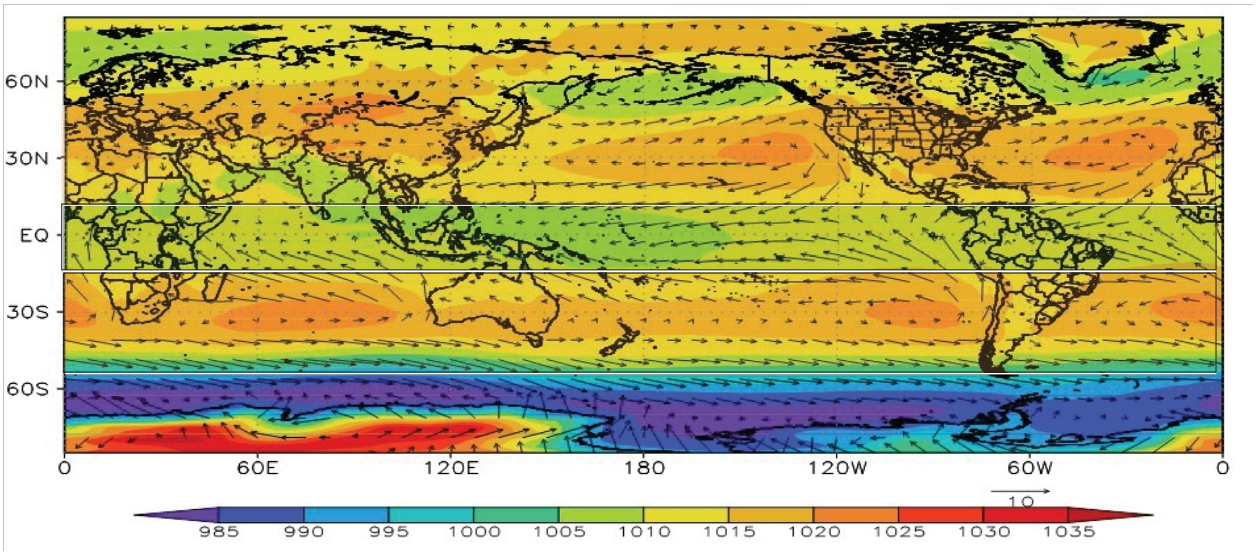


Figure 4 - Pressure and surface winds. Source: Reboita et al (2O12).

The climate of our region is strongly influenced by the South Atlantic anticyclone. Figure 5 shows the average rainfall and winds in the lower atmosphere (85O hPa) over South America and the adjacent Atlantic Ocean for summer (DEF) and winter (JJA). A substantial change in the summer and winter rainfall regime is observed. During the warm season it rains over most of South America, while in winter it rains only in the northern region, over Uruguay and southern Brazil and in southern Chile.

The increase in rainfall over South America is associated with the South American Monsoon that begins to develop in the spring, peaks in the summer and retreats northward in the fall. This Monsoon is characterized by a rainfall maximum in the Amazon basin and by a band of intense rainfall that extends from the Amazon southeastward to the Atlantic Ocean diagonally, called the South Atlantic Convergence Zone (SACZ). Although the SACZ is not located over Uruguay, its variability influences our climate.

Associated with the changes in rainfall, there is a change in low level winds. Winter is characterized by a semi-permanent anticyclone that enters over the continent generating medium winds with a northerly component over our region. Thus, the moisture transport necessary for rainfall comes from the winds associated with this anticyclone from the Atlantic at latitudes between 1O and 2OS, which then turn southward. During the summer, the semi-permanent anticyclone retracts towards the ocean due to the generation of a continental low pressure. This low pressure has associated winds from the north called the low level jet. Thus, during the summer, humidity arrives to our region mainly in a trajectory that comes from

south of the Amazon. When the low-level jet is more intense and arrives south of 25 S, intense rainfall events occur in our country.

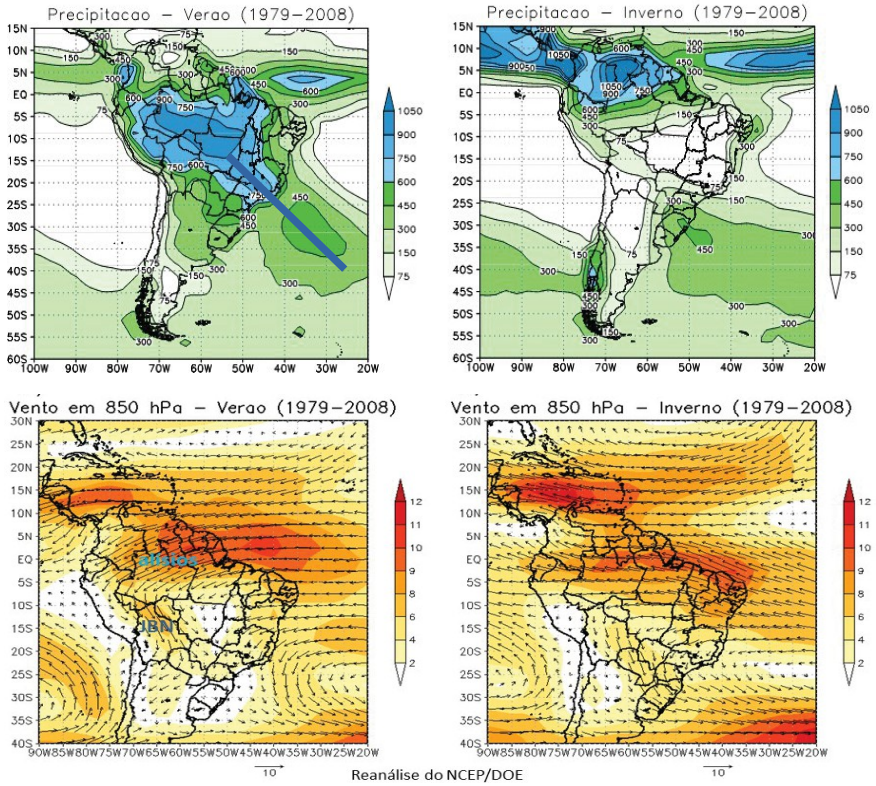


Figure 5 - Climatology of rainfall and winds in low layers. The blue line marks the ZCAS. Source: Reboita et al (2O12).

4.2 Extratropical region

In the tropical region, temperature has little latitudinal variation. But, beyond 3O° and, in particular, in mid-latitudes (3O to 6O°) the atmosphere has important latitudinal temperature gradients which allow it to transport energy towards the poles through horizontal mixing. This mixing is carried out by transient cyclones and anticyclones.

A cyclone (or atmospheric depression) is a center of low pressure at the surface. In the southern hemisphere the winds rotate around the low pressure center in a clockwise direction.

An anticyclone is a surface high pressure center. In the southern hemisphere, winds rotate around the high pressure center in a counterclockwise direction.

Unlike the semi-permanent anticyclone, which is the result of the descent of air in the Hadley cell, and therefore can be found almost all the time, transient cyclones and anticyclones last about 5-7 days. In that 5-7 day cycle the cyclone or anticyclone develops, reaches a maximum amplitude and then decays. That is why they are called transients.

When rotating clockwise, the winds associated with a cyclone have an associated cold front to the west of the center and a warm front to the east of the center (Figure 6). These fronts move latitudinally, mixing cold air with warm air and thus transporting heat. In addition, the cold air is generally drier than the warm air, so it transports moisture latitudinally and therefore also energy.

Cold and warm fronts are transition zones between cold and warm air masses and are often characterized by rain and sudden temperature changes. Likewise, the development of cyclones over our country is common and the associated strong winds generate important socio-economic damages, particularly along the coastal strip. Therefore, these cyclones and transient anticyclones determine the weather day by day in our region.

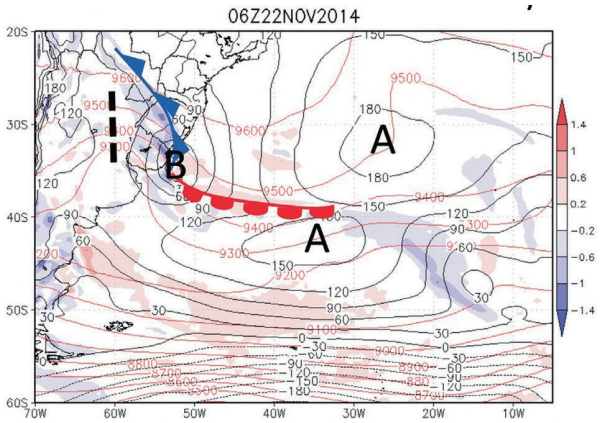


Figure 6 - Example of transient cyclone and associated fronts. The letter B indicates the location of the low pressure center and the colors indicate horizontal transport of cold (blue) or warm (red) air. Source: Reboita et al (2O17).

The development of cyclones is conditioned by the winds at altitude, in particular by the curvature and intensity of the jet stream. The jet stream is a region of maximum winds at altitude, about 1O km above the surface. Figure 7 shows the climatological winds for summer and winter in the southern hemisphere. It can be seen that in summer there is a maximum of winds at latitudes close to 4O-5O°S, which indicates the existence of the jet stream. In winter the situation is more complicated, with a subtropical jet stream passing over Uruguay, and a polar jet stream at latitudes close to 6O°S, which is observed mainly in the Pacific Ocean sector.

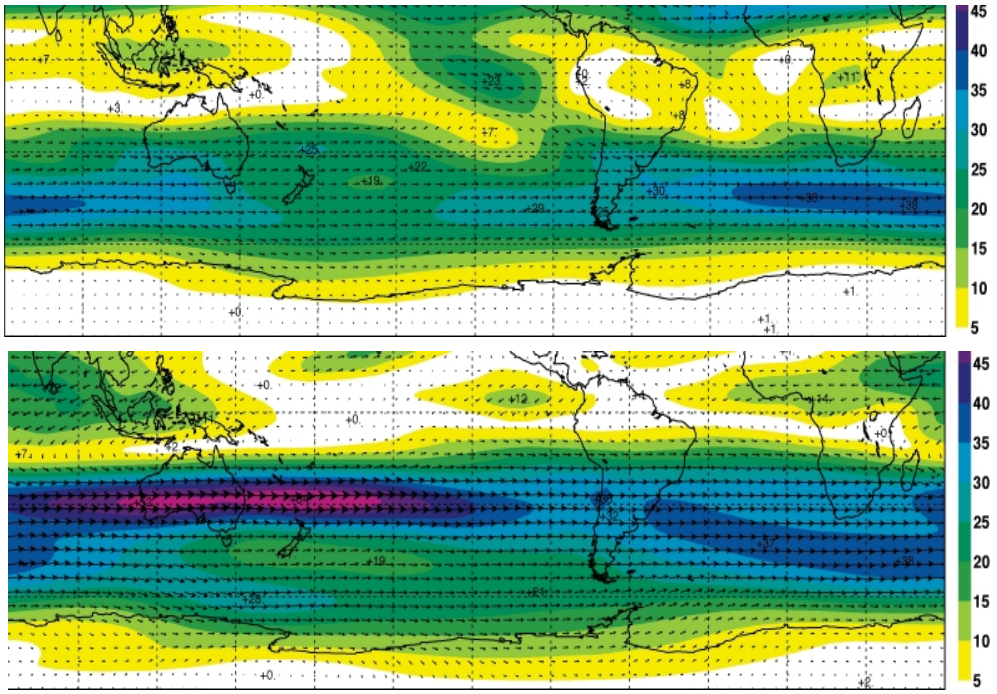


Figure 7 - Climatological winds for summer (top) and winter (bottom). Source: ERA4O Atlas.

The climatology of extratropical cyclone formation over South America is shown in Figure 8. It can be seen that Uruguay is a cyclone formation zone both in winter and summer. In winter, particularly, our country is located in the region of greatest cyclone development in all of South America.

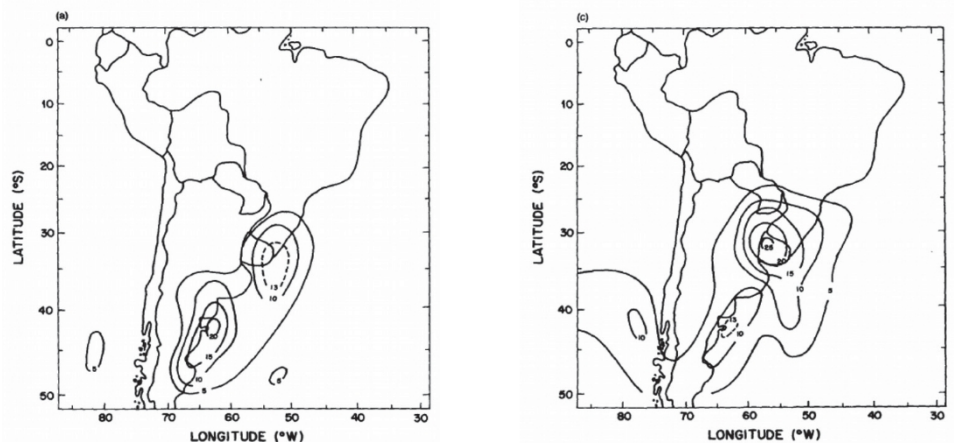


Figure 8 - Cyclogenesis climatology for summer (left) and winter (right). Source: Gan and Rao (1991)

4.3 Mesoscale Convective Complexes

Uruguay is located in a transition zone between the tropical climate and the extratropical climate of mid-latitudes. Therefore, it has characteristics of both climates. In winter the weather in our region is dominated by the presence of transient cyclones/anticyclones and fronts. In the warm season, in addition to fronts, there are other smaller scale phenomena that are common and bring severe weather: mesoscale convective complexes (MCCs). MCCs are organized convective systems with a circular structure. These MCCs can have associated extreme rainfall, hail, localized high winds, electrical activity and tornadoes. Figure 9 shows a satellite image clearly showing a MCC affecting our country.

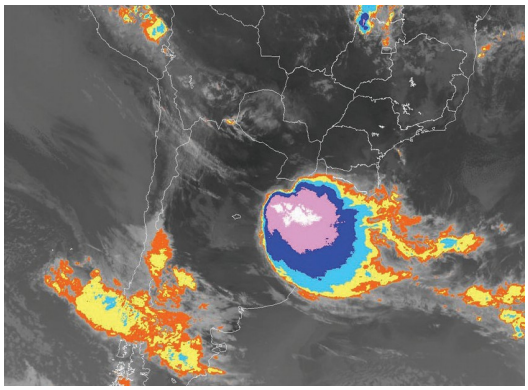


Figure 9 - Satellite image of a mesoscale convective complex. Source: Vlab.

The maximum frequency of occurrence of MCCs is in Paraguay and they occur over Uruguay when the low level jet extends further south of 25°S bringing warm and humid air that destabilizes the region (Figure 1O).

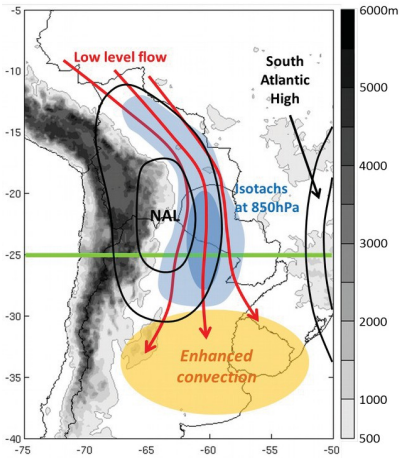


Figure 1O - Schematic of surface conditions that favor the development of MCCs. In red the low layer jet is indicated. Source: Vlab.

4.4 Summary

Figure 11 summarizes the most important meteorological phenomena for South America. For our country at low levels the most important phenomena are: extratropical cyclones and their associated fronts, mesoscale convective complexes and the existence of the low level jet. At high levels the weather over Uruguay depends strongly on the existence of the subtropical jet stream that passes overhead at a height of about 10 km.

Natural climate variability will generate changes in atmospheric circulation, such as in the position and intensity of the jet stream, which modulates the occurrence of cyclones, fronts, MCCs and other meteorological phenomena, thus affecting rainfall, temperatures and winds over Uruguay.

Human activity alters the terrestrial radiative balance so that the atmosphere and the ocean will have to change their circulation (in addition to albedo) in order to obtain a global energy balance. These changes in circulation have their correlate at the regional level, which will end up changing the frequency of occurrence of meteorological phenomena, thus affecting the distribution of rainfall, temperature and other variables of interest.

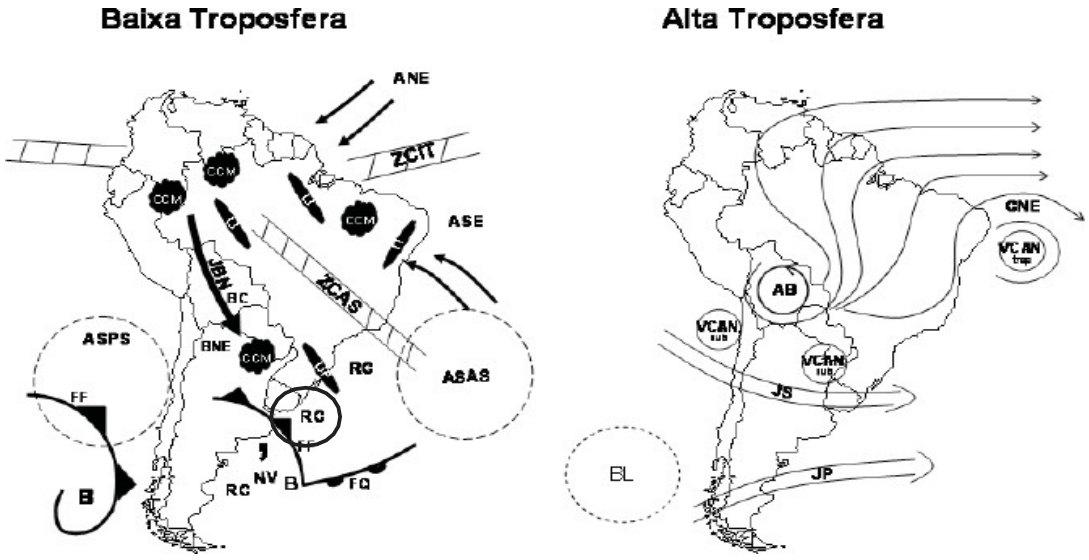


Figure 11 - Low (left) and high (right) level weather systems for South America. Source: Reboita et al (2O1O).

5. Ocean circulation

Just as the atmosphere is fast and has a short memory - the state of the atmosphere at a given time has no relation to its state 2 weeks later - the ocean has characteristic slower evolution times and a longer memory. It therefore sets the pace of climate variations from scales of weeks onward. This is because the ocean has three fundamental properties that affect climate:
- large storage capacity
- can transport quantities
- continuously exchanges with the atmosphere

Due to the laws of conservation, these three functions are not independent but have the following relationship:

$$Exchange = Storage + Transport$$

and applies to mass, energy and chemicals such as carbon. Taking energy as an example, this relationship states that the net energy exchanged with the atmosphere in a given region of the ocean is converted into an increase in energy in that ocean region and a (mainly lateral) transport of energy by currents.

The surface of the oceans covers 36O million km^2 , which represents 71% of the Earth's surface. Its mass is $1.4x1O^{21}$ kg and contains 97% of the water, being the source of the rainfall that allows life on the continents. Thus, the ocean is a gigantic reservoir of water that feeds the hydrologic cycle, various chemical compounds and energy. Evaporates 1 m of water per year of which 9O cm returns directly to the ocean and the remaining 1O cm rains on the continents maintaining the continental hydrological cycle.

The ocean is the largest reservoir of carbon in the global carbon cycle and therefore plays a fundamental role in climate change. The atmosphere is a relatively small reservoir of carbon compared to sedimentary rocks, the oceans and the terrestrial biosphere (including soil). More than $5Ox1O^6$ GtC are found in the Earth's crust, which is more than 1OOO times the stock in the ocean, more than 2OOOOO times the stock in the soil, and more than 5OOOOO times the stock in the atmosphere. However, the changes in carbon concentration in sedimentary rocks are very small and the associated fluxes (on the order of O.2 GtC/yr) are much smaller than those between the ocean, atmosphere and soil. The oceans contain about 4O.OOO Gt of carbon, i.e. 5O times more than the atmosphere. The exchange with the atmosphere is 9O GtC/year and occurs mainly with the surface layers of the ocean. In comparison, the exchange of the atmosphere with the continental regions is 12O GtC/year.

In terms of energy, the ocean is the medium that accumulates the greatest amount of the energy that the planet receives from the sun. It is estimated that 7O% of the solar radiative flux is absorbed and stored in the surface layers of the tropical oceans. This large capacity for

thermal energy storage is related to its large mass (3OO times greater than that of the atmosphere) and to the specific heat of seawater (4 times greater than that of air) which results in ocean thermal inertia more than 12OO times greater than that of the atmosphere. The delivery of energy from the ocean, mostly in the form of latent heat of evaporation, is the fundamental source for the functioning of the atmosphere.

On an annual average level, it is observed that the ocean absorbs heat in equatorial and tropical regions and loses heat to the atmosphere at high latitudes, which implies a meridional transport of energy, as mentioned in the introduction.

The ocean circulation can be divided into two components according to the forcing. The forcing circulation directly forced by the winds occupies the first kilometer of the water column and is characterized by counterclockwise subtropical gyres in the southern hemisphere and clockwise in the northern hemisphere. In our region, the South Atlantic subtropical gyre contains t h e Brazil current on the western edge that transports warm and saline waters to the south. This current meets off the province of Buenos Aires with the Malvinas current that transports cold and dilute waters from the south, generating the Brazil-Malvinas confluence, one of the most energetic oceanic zones in the world. Around Antarctica the winds generate the Antarctic Circumpolar Circulation that circles the world.

The other component of the circulation is called the thermohaline circulation as it is forced mainly by variations in temperature and salinity, which result in changes in density. This circulation is characterized by the formation of deep water (subsidence) in the Labrador Sea and Greenland Sea in the northern hemisphere, which then flows southward in the Atlantic to a depth of between 15OO and 35OO m and then continues on its way to the Indian Ocean and North Pacific. There is also deep water formation in the Weddel and Ross Seas which, due to their higher density, tend to circulate at greater depths. Circulation has time scales of hundreds to thousands of years and t h e oldest waters in the ocean are found in the North Pacific.

Figure 12 shows a schematic of the surface currents that result from the two components of the ocean circulation, while Figure 13 shows a schematic of the thermohaline circulation that dominates at depth.

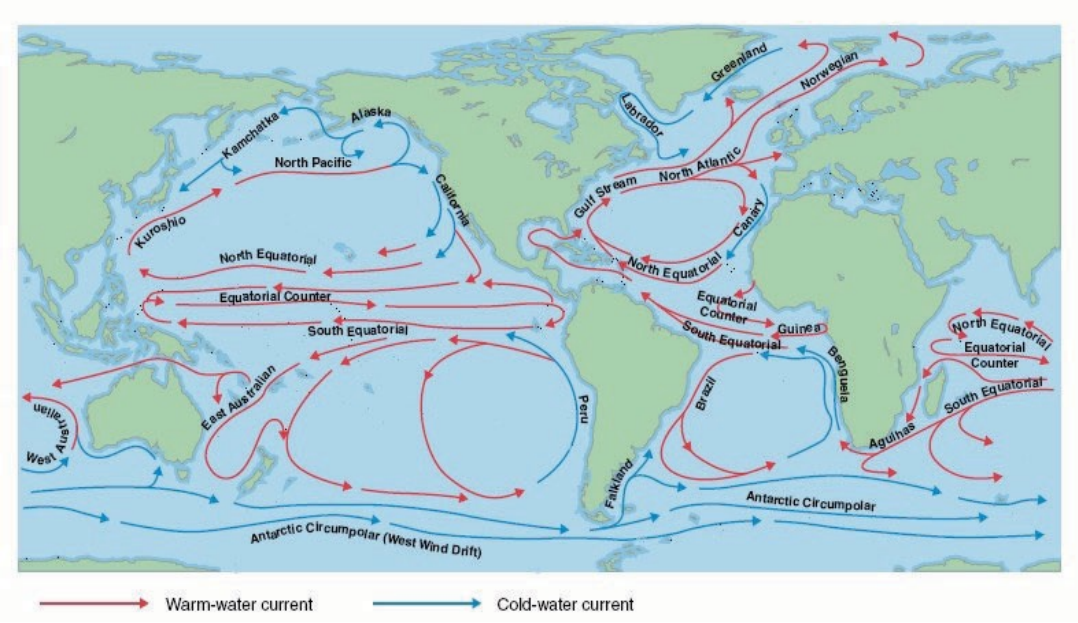


Figure 12 - Diagram of surface currents. Cold currents are indicated in blue and warm currents in red. Source: www.areaciencias.com.

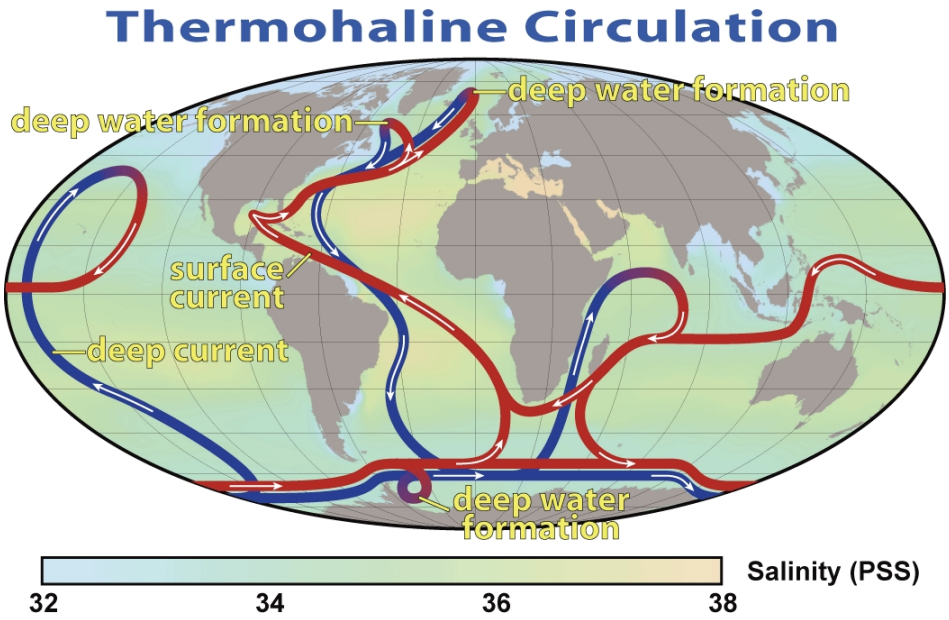


Figure 13 - Diagram of thermohaline circulation, with deep water formation sites and surface (red) and deep (blue) currents. Source: Wikipedia.

Surface currents are warm if they go from low to high latitudes and cold otherwise, since in their movement they transport water with a given temperature. Thus, currents modify the sea surface temperature structure with respect to an ocean at rest. In the latter case the isotherms would tend to be parallel to circles of latitude since insolation is maximum at the equator and minimum at the poles. Therefore, deviations of the observed surface isotherm pattern from isotherms parallel to circles of latitude are a consequence of the currents. As seen in Figure 14, there are large deviations, particularly in the tropical region. For example, for both hemispheres the eastern tropical Pacific has much cooler temperatures than the western tropical Pacific. The same is true in the Atlantic Ocean and is the result of subtropical ocean gyres.

The temperature difference between the east (Peruvian coasts) and west (Australian coasts) of the equatorial Pacific Ocean is close to 6° C, and the atmosphere responds to this gradient. Being warmer, the air over the western Pacific tends to rise, generating heavy rains over northern Australia and Oceania. Once this air reaches an altitude of 12-15km, it begins to move eastward, descending into the eastern Pacific. The circulation closes at the surface with the trade winds moving from east to west. This circulation is called the Walker cell and is fundamental to understanding the El Niño-Southern Oscillation.

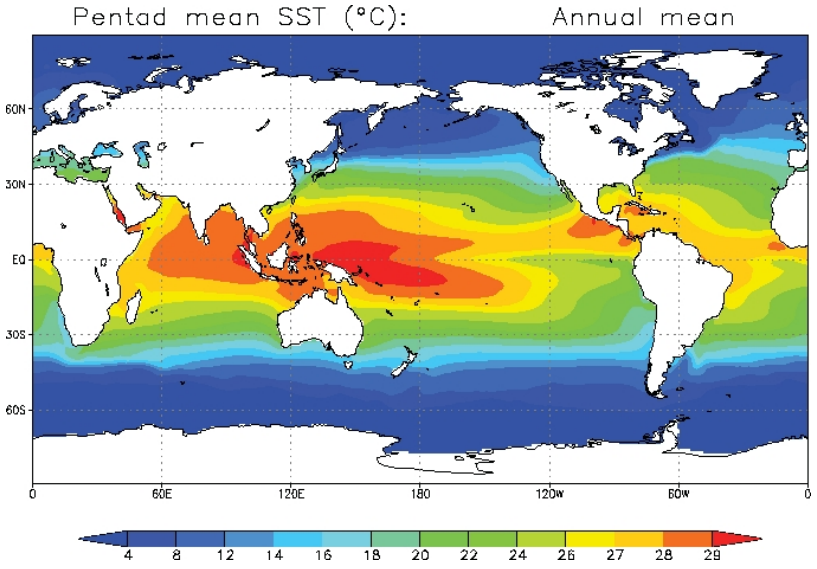


Figure 14 - Mean annual sea surface temperature. Source: NOAA CPC.

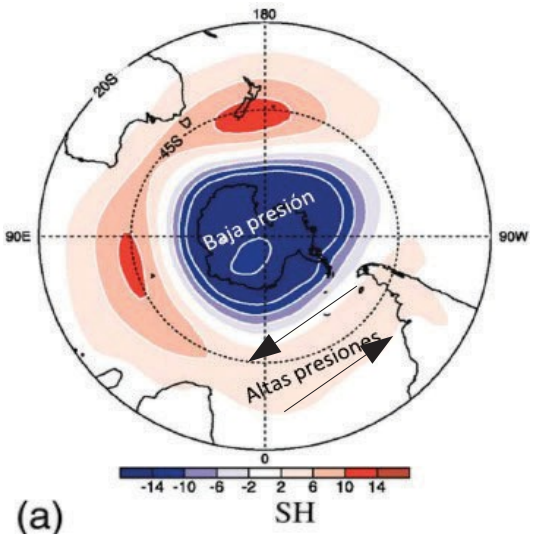
7. Climate variability modes

As we saw in the introduction, climate varies over a wide range of time and space scales due to instabilities internal to the climate system and external forcings. In general the characteristic time scale is longer for phenomena of large spatial (horizontal) scale. For example, tornadoes in the atmosphere have scales of minutes/hours and hundreds of meters. Convective storms last several hours and their extension is several kilometers. Cyclones last for days and their characteristic radius is in the order of hundreds of kilometers. All these are meteorological phenomena that define the weather in a region.

At the climatic level, i.e. for scales longer than a couple of weeks, the Madden-Julian Oscillation (MJO) has time scales of 4O-6O days and thousands of kilometers in extent. The JMO is the most important climatic phenomenon at the intraseasonal level. The El Niño-Southern Oscillation occurs on interannual scales, as it has a cycle of between 2 and 7 years and a typical extension of 5,OOO-1O,OOO km. On longer time scales, decadal and inter-decadal, it is possible to identify the Pacific Decadal Oscillation and the Atlantic Multidecadal Oscillation, which are fundamentally oceanic phenomena that occupy an entire basin.

7.1 South Annular Mode

The Southern Annular Mode (SAM) represents a redistribution of mass between the mid-latitude and high-latitude atmosphere in such a way that it results in surface pressure anomalies and hence winds. The SAM has daily and lower frequency variability in which it alternates between positive and negative phases. Figure 24 shows the surface pressure anomalies associated with the positive phase of the SAM (the negative phase has opposite anomalies).



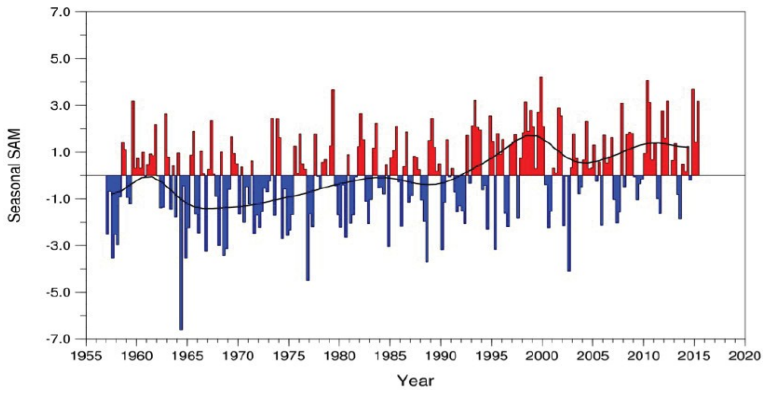


Figure 24 - Surface pressure anomalies in the positive phase of SAM (upper panel). Arrows indicate the associated wind direction. SAM time series (lower panel). Source: Wikipedia

Since the 1990s, the positive phase of the SAM has become more frequent than the negative phase, thus showing a tendency to have higher than normal surface pressures in the belt between 4O-6OS. This trend is more pronounced during the summer and has been associated mainly with the weakening of the ozone layer in the Antarctic.

In terms of impacts, it has been shown that SAM has influence over South America during October-December. In particular, during the positive phase of SAM, the winds that bring moisture from the north to Uruguay weaken, thus decreasing rainfall in our country and the region. Temperature changes are not so marked.

7.2 El Niño-Southern Oscillation

The phenomenon par excellence that generates variability and gives predictability to year-to-year climate anomalies in our region is the El Niño-Southern Oscillation (ENSO). This phenomenon is often associated with extreme weather events (extreme rains, droughts, floods, etc). ENSO has a warm phase called El Niño and a cold phase called La Niña.

ENSO is a phenomenon that results from the coupling between the ocean and the atmosphere of the tropical Pacific Ocean. At the oceanic level, El Niño (La Niña) is an anomalous warming (cooling) of the equatorial waters of the central and eastern Pacific Ocean (Figure 25). During an El Niño event, the warming runs eastward from the region of maximum rainfall over the equator, which alters the regions of heat release that govern atmospheric movements. In response, the atmosphere generates waves that propagate within the tropical region and toward mid-latitudes. These waves induce circulation anomalies over our

region by altering the position and intensity of the jet stream at altitude, as well as the low-level jet (Barreiro 2O1O, Arizmendi and Barreiro 2O17). Thus El Niño (and La Niña) is able to alter the precipitation and temperature of our country. During El Niño, the jet stream at high altitude intensifies and acquires a shape that favors the ascent of air over Uruguay, which together with an intensified low layer jet, favors rainfall in Uruguay.

An ENSO event lasts approximately 9 to 12 months, typically beginning in September and ending in May with a maximum amplitude during November-January. ENSO has a periodicity of between 2 and 7 years. All El Niño events are different either in the intensity of the maximum sea temperature anomaly or in the pattern of temperature anomalies. They can also have different evolutions: for example, they can have a growth phase characterized by a displacement of the anomalies from the east coast towards the center of the basin, or by a stationary growth phase with a n increase in the amplitude in the center of the basin. The same is true for La Niña events, and therefore, it is to be expected that there will be variations in the impact of the different events on our country and the world. Nevertheless, it is possible to define an average impact of the Niño and Niña events, which is shown in Figure 26 for rainfall.

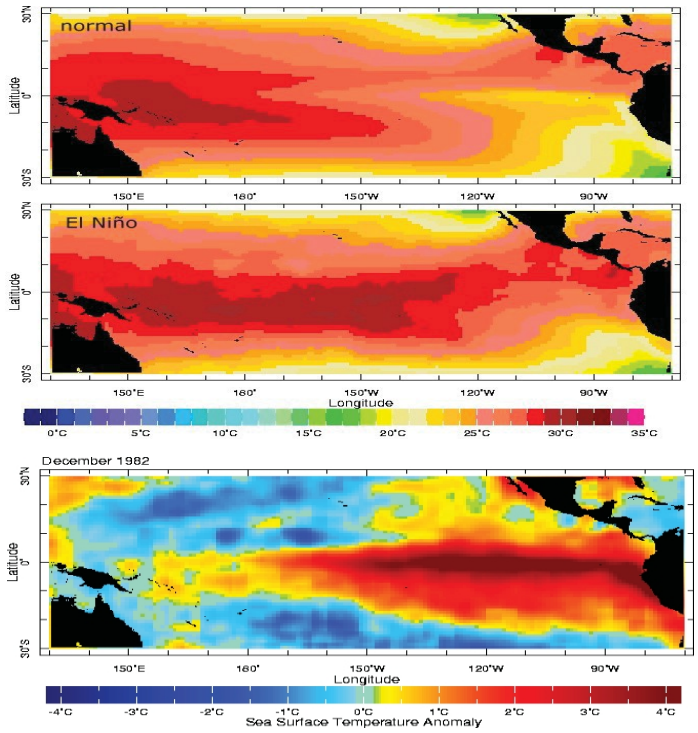


Figure 25 - Sea surface temperature in December. Normal conditions (top panel), conditions during El Niño of December 1982 (middle panel) and anomalies during December 1982 (bottom panel).

As ENSO is generally weak during the winter, we will focus on the impact during spring (September-October-November, SON), summer (DEF) and autumn (March-April-May, MAM). It is observed that during El Niño there is a significant increase in rainfall in SON and DEF, mainly north of the Negro River. During La Niña there is a decrease in rainfall throughout the territory for SON, DEF and MAM.

The variability in the impact of the different Niño and Niña events can be shown with box plots in Figure 27 separating the northern and southern regions of the Rio Negro.

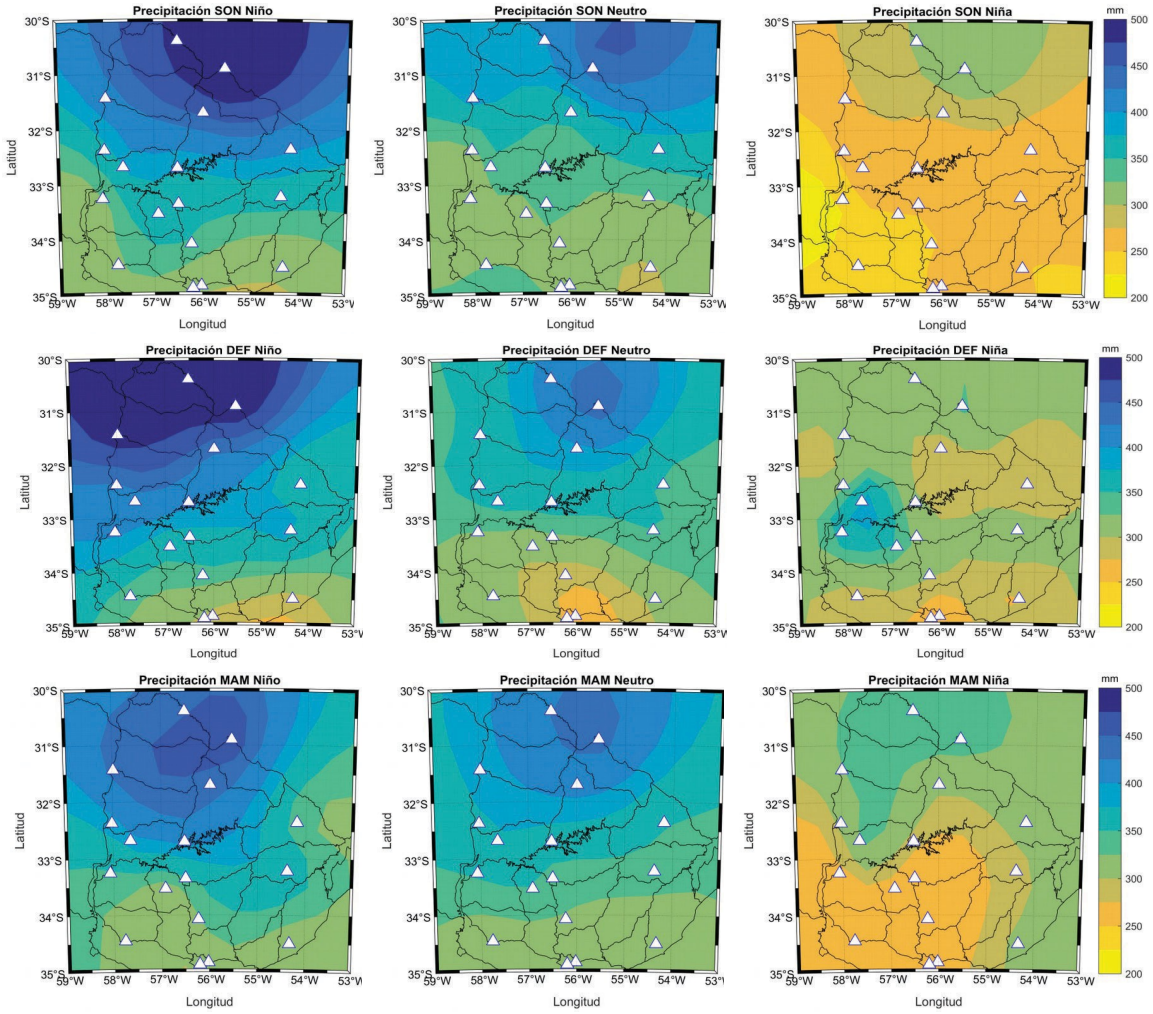


Figure 26 - Average impact of El Niño (left column) and La Niña (right column) on rainfall in Uruguay. The center commune is the case for neutral years. The first row is for SON, the second for DEF and the third for MAM.

It is observed that:

- SON
  - North:
    - During non-ENSO years, rainfall variability is large: it can rain 25O or 6OO mm.
    - There are Niña events with more rainfall than the median of Neutral years (4OO mm) but in others it is reduced to 1OO mm.
    - Niño years are not so different from Neutral years, except in extreme cases.
  - South:

    clear decrease in rainfall during Niña years.
- DEF
  - North:
    - El Niño increases median and variance vs. Neutral years
    - La Niña decreases median vs. Neutral years
  - South:
    - Increased variance during La Niña years compared to Neutral and Niño years.
- MAM
  - North:
    - El Niño increases median vs. Neutral years
    - La Niña decreases median vs. Neutral years
    - Large variance in rainfall during MAM independent of ENSO phase
  - South:
    - Decrease of median and variance during La Niña years
    - Increase in variance during El Niño years

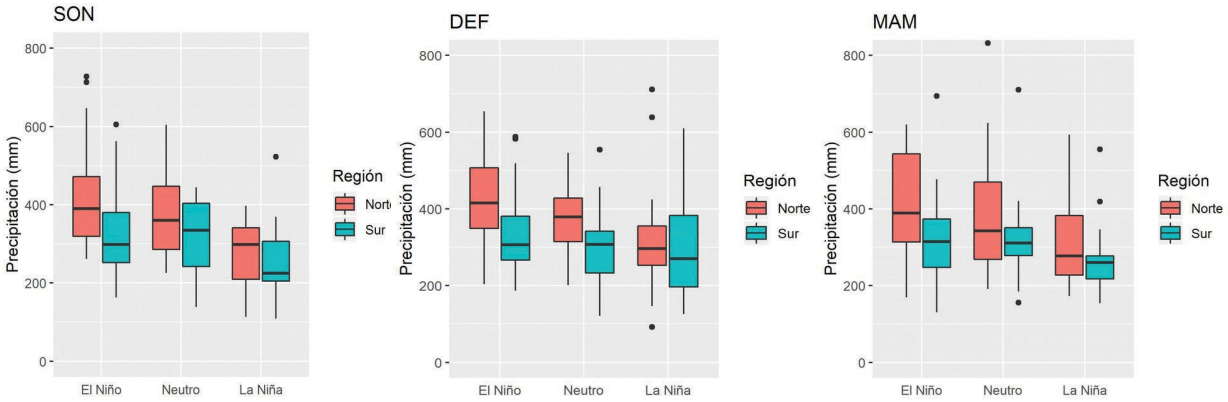


Figure 27 - Box plots for Niño. Neutral and Niña, for different seasons: SON (left panel), DEF (center panel), MAM (right panel).

It is also important to mention that El Niño changes the daily rainfall distribution over our region. It has been shown that during El Niño (La Niña) there is a higher (lower) probability of occurrence of extreme daily rainfall events (Grimm and Tedeschi 2OO9). This occurs because during El Niño there is a tendency to favor some atmospheric circulation regimes that are associated with intense rainfall events, such as those associated with an increase in the intensity of northern winds that bring humidity to our country.

El Niño also affects the temperature in our region. In particular, it has been shown that El Niño tends to increase the average temperature during late autumn (Barreiro 2O1O). During the summer the maximum temperature is lower during El Niño years, particularly in the north of the country, due to increased rainfall (Barreiro and Diaz 2O11).

Accompanying the impact on rainfall is a change in the flows of the Río de la Plata and Uruguay. For the Uruguay River during Niño years, the flow increases significantly in SON and DEF, while in MAM the variance increases. During La Niña years the flow decreases in DEF and MAM (Figure 28). For the La Plata River, flow increases in DEF and MAM during El Niño years. In La Niña years the median flow decreases in DEF and in SON the variance decreases (Figure 29).

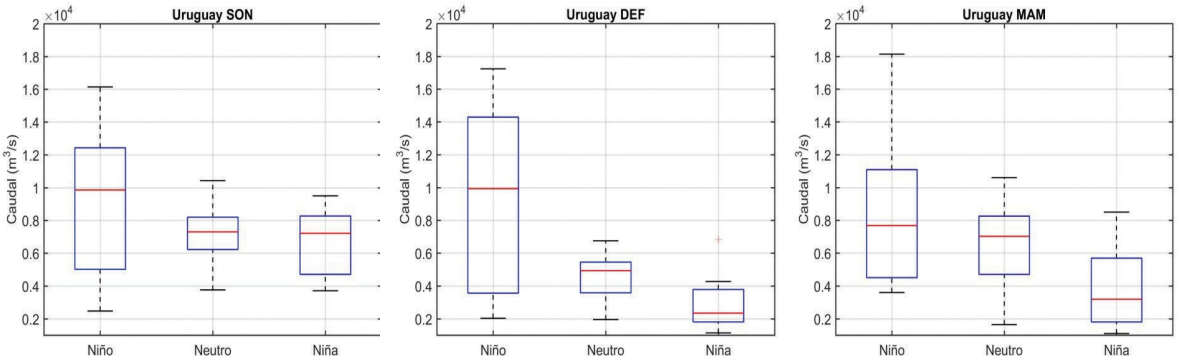


Figure 28 - Flow in the Uruguay River during Niño, Neutral and Niña years for different seasons of the year: SON (left panel), DEF (central panel) and MAM (right panel).

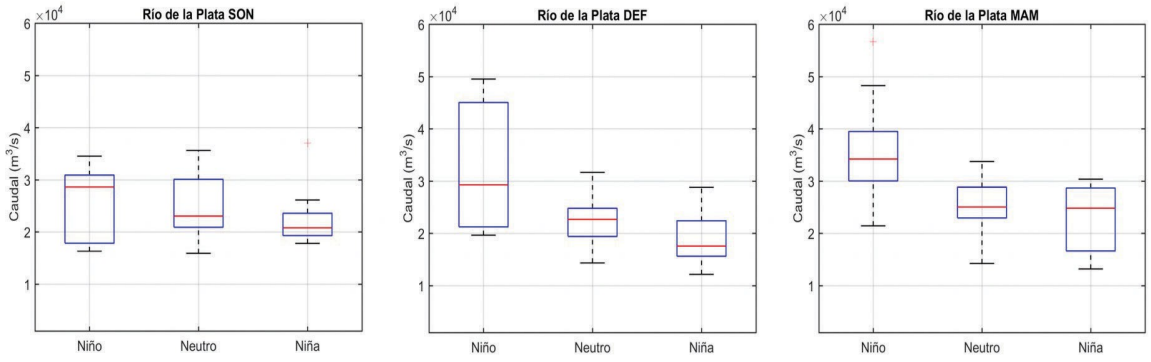


Figure 29 - Flow in the La Plata River during Niño, Neutral and Niña years for different seasons: SON (left panel), DEF (center panel) and MAM (right panel).

7.3 Pacific Decadal Oscillation

One of the reasons why the impact of ENSO is not always the same (beyond the differences in patterns, amplitude and evolution of ENSO events) is that its signal interacts with those of other oceans (Barreiro and Tipmann 2OO8, Martin-Gomez and Barreiro 2O15) and modes of variability. Among these modes is the Pacific Decadal Oscillation (PDO), which is a mode of ocean variability that consists of a warming (cooling) of the tropical (northern extratropical) waters of the Pacific Ocean, and vice versa. The pattern of sea surface temperature anomalies for the PDO phases is shown i n Figure 3O. This "oscillation" would have a "period" of about 5O-6O years that modifies the base state of the Pacific Ocean in which ENSO develops.

The PDO induces an increase (decrease) in summer rainfall over Uruguay when it is in its warm (cold) phase (Barreiro et al 2O14). Likewise, when the PDO and ENSO are in the same phase, i.e., both modes of variability have warm (or cold) anomalies in the tropical Pacific, the impact of ENSO on Uruguay is greater, and vice versa, mainly in late spring (Kayano and Andreoli 2OO7).

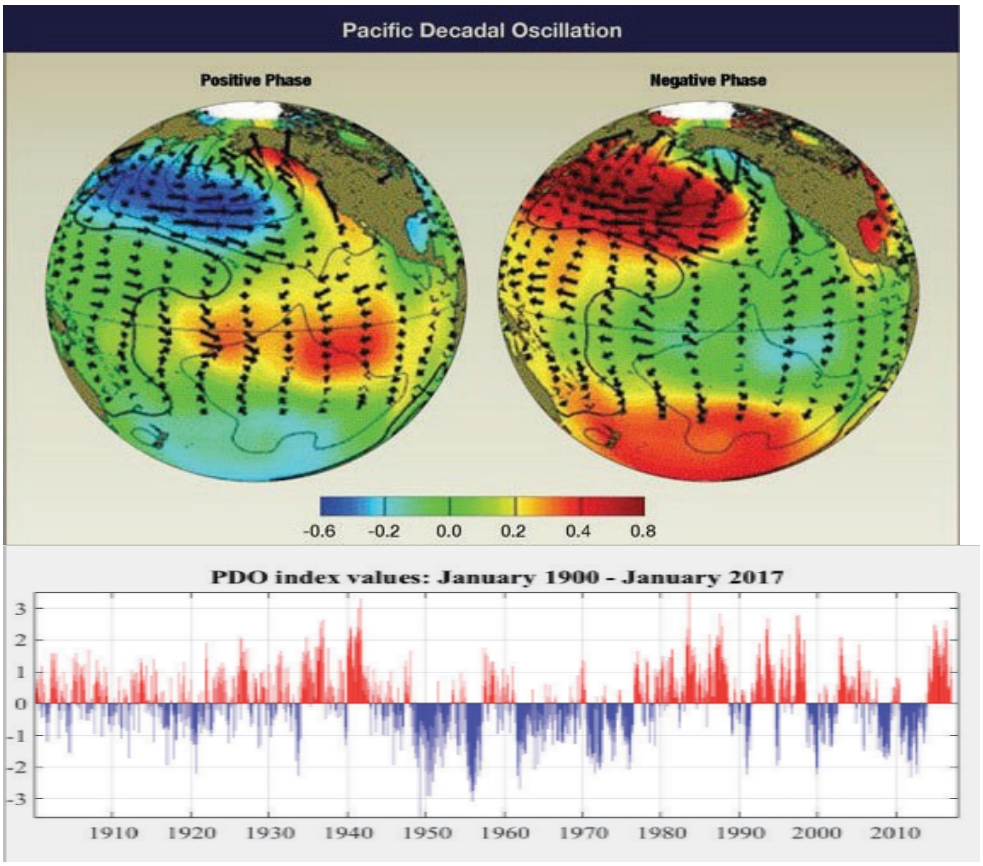


Figure 3O - Sea surface temperature anomalies associated with PDO phases, and temporal evolution. Source: Wikipedia.

7.4 Atlantic Multidecadal Oscillation

It is a mode of oceanic variability that consists of a warming/cooling of the North Atlantic with a 65-8O year "period" (AMO). Like the PDO, the AMO does not have a defined period because there is no historical series long enough to characterize its temporal evolution. The pattern of sea surface temperature anomalies associated with the warm phase of the AMO is shown in Figure 31.

The impact of ENSO is modulated by the AMO. When the AMO is in a negative phase, the rainfall impacts of an El Niño (La Niña) event are more intense (weaker). This occurs for spring and summer. Therefore, AMO and ENSO interact constructively when they are in opposite phases (Kayano and Capistrano 2O13).

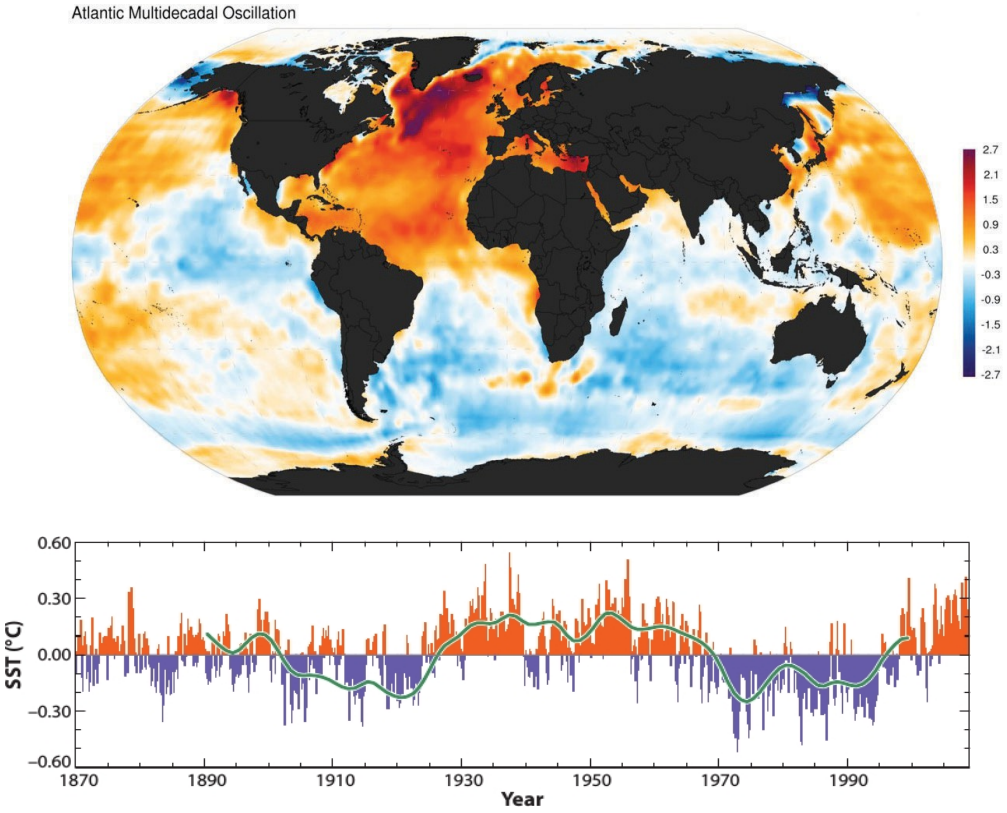


Figure 31 - Sea surface temperature anomaly associated with the warm phase of the AMO, and temporal evolution. Source: Wikipedia.

Annex 9

NAP-CITIES

EXECUTIVE SUMMARY

National Adaptation Plan to Climate Change and Variability for Cities and Infrastructures in Uruguay

Ministerio de Vivienda y Ordenamiento Territorial
Ministerio de Ambiente
SNRCC Uruguay

National Adaptation Plan to Climate Change and Variability for Cities and Infrastructures in Uruguay (NAP-Cities)

Executive Summary

Ministerio de Vivienda y Ordenamiento Territorial

Ministerio de Ambiente

SNRCC Uruguay

Uruguay
2021

This plan has been developed within the framework of the URU/18/002 *Project, Integration of the Adaptation Approach in Cities, Infrastructure and Land Planning*, between 2018 and 2021. The project was led by the Ministry of Housing and Land Planning (MVOT, by its acronym in Spanish) and the Ministry of Environment (MA, by its acronym in Spanish), implemented by the United Nations Development Programme (UNDP), financed by the Climate Green Fund, and supported by the Uruguayan International Cooperation Agency (AUCI, by its acronym in Spanish).

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Ministerio de Ambiente

Uruguay Presidencia

auci

GREEN CLIMATE FUND

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The URU 18/002 project started in 2018. National elections took place during the process and this caused changes in authorities and technical staff in the project's Board and in the Technical Committee. This page mentions current authorities. Nevertheless, we thank all participants from earlier stages.

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The analysis and policy recommendations in this report do not necessarily reflect the opinion of the United Nations Development Programme, its Executive Board or its Member States.
The use of language that does not discriminate between men and women is one of the concerns of our team. Nevertheless, there is no consensus among linguists on how to achieve this in Spanish. To that effect and with the intention of avoiding explicit reference to both genders, we have decided to use the generic masculine form on the understanding that all statements refer to both men and women.

CONTENTS

PROLOGUES

With the creation of the Ministry of Environment (MA, by its acronym in Spanish) Uruguay has established an institutional structure which sets the tone for a new State vision regarding the protection of natural resources and the environment and stresses the significance of the environmental agenda. Within this framework, the National Adaptation Plan to Climate Change and Variability for Cities and Infrastructures in Uruguay (NAP-Cities) becomes a strategic tool which allows progress in policies and environmental urban-related planning processes taking place in Uruguay, considers climate change impact and embraces ecosystem services which prove essential in the adaptation process.

Our country has come a long way in the international climate agenda. Uruguay has ratified the main commitments defined in the UN Framework Convention on Climate Change and has promoted the creation of new regulations and specific institutional structure at a national level in order to address the challenges that climate change and variability will pose to mankind under a local perspective and considering the climate hazards that Uruguay is facing as well as our people's specific needs.

Our Ministry has stressed the importance of these issues, granting the hierarchy of a National Directorate to the office in charge of policies associated to climate change and variability.

Additionally, the Climate Change National Directorate (DINACC, by its acronym in Spanish) is working on a long-term climate strategy within the framework of the Climate Change and Variability National Response System (SNRCC, by its acronym in Spanish) -- the institutional structure of the Directorate. In such context, NAP-Cities provides a fundamental roadmap to move ahead in the creation of resilient cities, environment-friendly and ready to address climate threats to the short, medium, and long-term.

Thus, MA takes the lead in key issues related to urban adaptation such as coastal management, valuation and protection of city ecosystem services, integrated management of water resources, and education in environmental issues. Following its active participation in the design of this plan through strong inter institutional and interdisciplinary work with authorities and technical experts, MA will also be part of the implementation process through the following agencies: National Directorate of Biodiversity and Ecosystem Services, National Directorate of Environmental Quality and Evaluation, National Directorate of Waters and the Climate Change National Directorate together with other national and departmental institutions.

We hope the institutional effort and commitment expressed in this plan may help the cities of our country be better prepared to address one of the main contemporary challenges. Our main goal is that this can improve the lives of those who live in urban areas now and in the future.

Adrián Peña
Minister of Environment

The Ministry of Housing and Land Planning hereby presents a new planning and management instrument in order to respond to the many challenges that climate change and variability will pose to cities and infrastructures in our country.

Uruguay is characterised by its significant and increasing urbanisation level, being one of the countries in Latin America with the highest urban population index. Over 94 % of its inhabitants live in cities and over 70 % of the population lives in coastal areas. It is in those cities where a significant number of activities and services can be found. Therefore, understanding and finding solutions to the main climate hazards in urban areas is a priority to ensure quality of life for our country's population.

Considering current and future climate scenarios is a strategy in the different national directorates that make up this government office.

The authorities and experts of the National Directorate of Land Planning have played a key role in the preparation of the Plan. This means that a valuable tool will be available for integrating approaches in planning and management actions related to the adaptation of cities and infrastructures in our territory -- a central pillar of national planning in all scales and dimensions.

NAP-Cities also supplies key components for guiding the design and planning of housing and neighbourhood improvement policies that our ministry runs. It systematises and proposes measures to address climate hazards, such as heat or cold waves, or increasing rainfall frequency and volume, and provides specific protocols to adapt houses and their respective environments to flood events or to offer energy-efficient alternatives, among other options needed to find the best solution for each case.

But such a plan not only offers a strategic perspective. It also boosts and helps focus institutional capacities in many ways. On the one hand, it enables and facilitates inter-institutional work, as well as interaction with society, since there is a shared vision and path. But it also contributes with substance and reflection on how to be more efficient when selecting, allotting and utilising public resources.

Therefore we thank and celebrate the team effort behind this publication.

Irene R. Moreira Fernández
Minister of Housing and Land Planning

National Adaptation Plan to Climate Change and Variability for Cities and Infrastructures.

Executive summary

The government of the Oriental Republic of Uruguay introduces the first National Adaptation Plan to Climate Change and Variability for Cities and Infrastructures in Uruguay (NAP-Cities).

NAP-Cities is a planning tool to reduce the country's vulnerability to the impact of climate change and variability, to promote adaptive capacity and resilience and to facilitate its integration to planned development actions. Identifies medium and long term adaptation needs and presents the implementation of strategies and programmes to address them. NAP-Cities was established under the COP16 Cancun Adaptation Framework (2010). It is a continuous, progressive and iterative process that allows for a country-driven, gender-responsive, participatory and transparent approach.

Its formulation and dissemination received the support of the Integration of the Adaptation Approach in Cities, Infrastructure and Land Planning project (URU/18/002). This project started in 2018 and was active over a period of three years. It was led by the Ministry of Housing, Land Planning & Environment (MVOTMA, by its acronym in Spanish) until the functions were transferred to the new Ministry of Housing & Land Planning (MVOT, by its acronym in Spanish), and the Ministry of Environment (MA) created in 2020. The United Nations Development Programme (UNDP) was in charge of its implementation, while the Climate Green Fund financed it together with the Uruguayan International Cooperation Agency and the National Climate Change and Variability Response System.

NAP-Cities was prepared between May and November 2021 in consultation and validation with all stakeholders. Several activities have been carried out in coordination with the project's Technical Committee by experts from the ministries and from the consultant team, as well as with the support of strategic institutional partnerships and specific agreements.

PHOTO
Rambla, Montevideo.
Carlos Lebrato

1

National Adaptation Plan to Climate Change and Variability for Cities and Infrastructures in Uruguay - Why?

1.a. Characteristics

With a total area of 176,220 km^2, Uruguay is the second smallest country in South America. Its economy is based on agro-industrial production and service industry, with great dynamism of tourism over the last years. With a low population density stressed by its low birth rates, 93.4 % of Uruguay's total population (3,286,314 inhabitants) lives in cities and a steady trend continues in that direction. The capital, Montevideo, is the biggest city, with 1,304,729 inhabitants. Population exceeds 50,000 inhabitants in 8 more cities, 31 cities are between 10,000 and 49,999 inhabitants, and 30 cities are between 5,000 and 9,999 inhabitants. These cities face multiple climate hazards due to a greater frequency and intensity of severe climate events, such as intense precipitation and floods alternating with drought periods, heat / cold waves, storms and strong winds and rising sea level. Population, activities and infrastructure are all predominantly concentrated in areas that are exposed to climate risks. These factors make the country highly vulnerable to climate change and variability, which explains the political priority given to implementing measures to increase resilience and adaptation to adverse effects derived from climate change, as well as to mitigate greenhouse gas emissions both through local efforts and with international support granted through the UN Framework Convention on Climate Change.[1][2][3][4][5][6]

Responding to climate change demands coordinated actions from governments. This is why Uruguay created in 2009 the National Climate Change and Variability Response System, which consists of government agencies coordinating competencies, objectives and capacities with other national stakeholders like academy, productive sectors and the civil society organizations. This System led the preparation of the National Policy on Climate Change under a wide participatory process. It also led the Nationally Determined Contribution (NDC) which was subject to public consultation. Both were approved in 2017. The NDC was conceived as a policy implementing tool and contains objectives, context and main mitigation and adaptation measures. Within this framework, Uruguay started preparing the National Adaptation Plans (NAP) for Coastal Zones, Energy and Health areas, while the preparation of plans for agriculture and cities has been completed.

1.b. Planning of city adaptation in Uruguay

From an institutional perspective, the Uruguayan government has expressed its commitment and concern in addressing variability and climate change issues and their effects by subscribing international agreements and creating regulations, institutionalism, and tools for land and sectorial planning.

NAP-Cities joins a long standing country process where different initiatives have been collected and systematised to reassess their value and diversity. This long experience allows us to build the adaptation plans on what the country, its institutions and its society know how to do, incorporating new approaches and lessons learned. It also provides a framework to guide the coordination and implementation of adaptation initiatives, and is also a planning tool to define and monitor priority activities.

The preparation of NAP-Cities was based on recommendations from the National Adaptation Plan technical guidelines prepared in December 2012 by the Least Developed Countries Expert Group. It emerges from a participatory and iterative process which began with the inter-institutional preparation of the Integration of the Adaptation Approach in Cities, Infrastructure and Land Planning (URU/18/002) project, whose activities started in May 2018 and will end in November 2021. Such process of collective construction builds on workshops, meetings and interviews for designing and validating the proposed strategy.[7]

[1] Source: World Bank. Available at: <https://datos.bancomundial.org/indicador/ag.srf.totl.k2?locations=UY>.

[2] INE, Population Census 2011. Available at: <https://www.ine.gub.uy/documents/10181/35289/analisispais.pdf>.

[3] URU/18/002 Project document Integración del enfoque de adaptación en ciudades, infraestructura y ordenamiento territorial en Uruguay. Available at: <https://www.gub.uy/ministerio ambiente/politicas y gestion/planes/plan nacional adaptacion cambio climatico ciudades infraestructuras nap ciudades>.

[4] INE, Population Census 2011. Available at: <https://www.ine.gub.uy/c/document_library/get_file?uuid=d83c4ee8 3e4d 4a00 a2d2 698ca25&groupId=10181>.

[5] URU/18/002 Project document Integración del enfoque de adaptación en ciudades, infraestructura y ordenamiento territorial en Uruguay. Available at: <https://www.gub.uy/ministerio ambiente/politicas y gestion/planes/plan nacional adaptacion cambio climatico ciudades infraestructuras nap ciudades>.

[6] Presidency of the Republic, Presidency of the Republic, Sustainable Development Goals Voluntary National Review 2021. Available at: <https://ods.gub.uy/images/2021/Informe_Nacional_Voluntario_Uruguay_2021.pdf>.

[7] United Nations Framework Convention on Climate Change, Technical Guidelines for the National Adaptation Plan Process 2012. Available at: <https://unfccc.int/files/adaptation/application/pdf/21209_unfccc_nap_es_lr_v1.pdf >.

Throughout its three years of activity the project worked in close collaboration with a Technical Committee formed by representatives from the MVOTMA, and whose roles were later moved to the MVOT and the MA (created in 2020), and the UNDP. Authorities and representatives from the Climate Change National Directorate, National Directorate of Land Planning, National Directorate of Waters, National Directorate of Environmental Quality and Evaluation, National Directorate of Biodiversity and Ecosystem Services, and National Directorate of Housing participated in the Committee, as well as other agencies from the Housing Public System such as the Neighbourhood Improvement Programme, MEVIR-Dr Alberto Gallinal Heber, and the National Housing Agency. The Committee assessed and validated each decision and progress made towards the construction of the Plan and its intermediate products. It also submitted the plan's development to the consideration of a broad institutional network of contacts.

NAP-Cities was based on coordinated work with political leaders and technical staff from international, national, departmental and local government agencies as well as with the academy and private sectors, the education system, civil society organisations and other related projects and activities, such as the preparation of NAP-Coasts and the Regional Program on Climate Change adaptation in vulnerable coastal Cities and Ecosystems of the Uruguay River.

To secure the process, the participation and communication strategy of NAP-Cities has been to plan and develop information and dissemination actions for different target audiences. Information transfer, training and awareness processes have been conceived as intermediate key phases of the participation process.

Each and every one of the actions in which the project and related institutions were involved became opportunities to build links and strengthen networks that will transcend the project itself and support the future implementation of NAP-Cities.

PHOTO
Thunderstorm.
La Unión, Montevideo.
Carlos Lebrato

2

Reasons to promote adaptation in Uruguay

2.a. Assessing climate, variability and climate change scenarios in Uruguay[8]

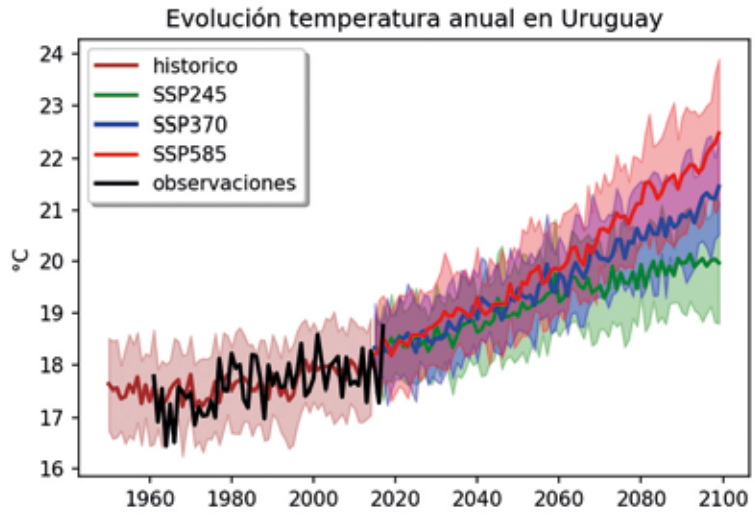
From a global perspective, the main climate risks for cities are extreme temperatures and temperature rise, coastal sea level rise, droughts, intense precipitations associated with floods, and extreme winds (IPCC-AR5). These are steady trends in 2021, according to the Sixth Evaluation Report (IPCC-AR6), where mean temperatures in South America have risen and where current sea level in the South Atlantic has risen at a higher pace than the global mean sea level. This has contributed to an increase of coastal flooding in low areas, and to the coastline regression in most sand beaches. In areas with high climate variability, like Uruguay, it is particularly hard to detect changes in these variables and attribute them to human activity. Consequently, this section summarises not only observed trends but also mean conditions and natural variability of the country's climate. Additionally, it includes projections based on state of the art climate models. Focus is made on separately describing temperature, rainfall and winds. However, it also points out that these variables are interrelated by atmospheric dynamics, which means that any change in any of them will generally affect the rest. [9] [10]

Temperature

For a short-term horizon (2020 2044) models project temperature rises between 0.5°C and 1.6°C compared to the 1981 2010 period and no significant differences in global socio-economic change scenarios (SSP). For a long-term horizon (2075-2099) models project temperature rises between 1.5°C and 5.5°C compared to the 1981-2010 period. Such figures heavily depend on the global socio-economic scenario under consideration and on the associated emissions of greenhouse gases. Indeed, scenario SSP245 shows an increase between 1.5°C and 3.0°C; SSP370 shows between 2.2°C and 4.6°C, and SSP585 shows between 2.6°C and 5.5°C. As far as extreme numbers, it is worth mentioning that heat waves in the region will rise in amount and duration by the end of the 21st century.[11] [12] [13]

Attention should be paid to the fact that a rise in temperature will also carry an increase in water vapour content in the atmosphere, and increment in storms and rainfall are to be expected in the absence of other changes.

FIGURE 1
Observed evolution, historical simulation and projections of mean annual average temperatures in Uruguay for several scenarios. Simulation curves show averages for 10 CMPI6 models, shaded areas show dispersion. Source: Barreiro *et al.* (2019). [14]



[8] This section was based on "Análisis del clima y escenarios de cambio y variabilidad climática en Uruguay". Marcelo Barreiro (1); Fernando Arizmendi (1,2), Nicolas Díaz (1), Romina Trinchin (1,2). (1) Department of Atmospheric Sciences Physics Institute Faculty of Sciences UDELAR. (2) National Institute of Meteorology Deliverable 4. June 2021. This work was prepared within the framework of the PNUD UDELAR Agreement, led by the Project URU/18/002 *Integrating adaptation into cities, infrastructure and local planning in Uruguay*.

[9] Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report (AR5), 2014. Available at: <https://www.ipcc.ch/assessment report/ar5/>.

[10] Intergovernmental Panel on Climate Change (IPCC), Sixth Assessment Report (AR6) 2021. Available at: <https://www.ipcc.ch/assessment report/ar6/>.

[11] Climate projections are based on models that numerically solve (using supercomputers) mathematical equations which characterise how mass and energy move in the atmosphere, oceans, continents and ice, and its exchange between them.

[12] Shared Socio-economic Pathways (SSPs), or global socio-economic scenarios of change, describe alternative socio economic future scenarios in the absence of climate policy intervention (IPCC, Glosario).

[13] According to CMIP5 models, from the Coupled Model Intercomparison Project of the World Climate Research Programme. Available at: <https://www.wcrp climate.org/wgcm cmip/wgcm cmip5>.

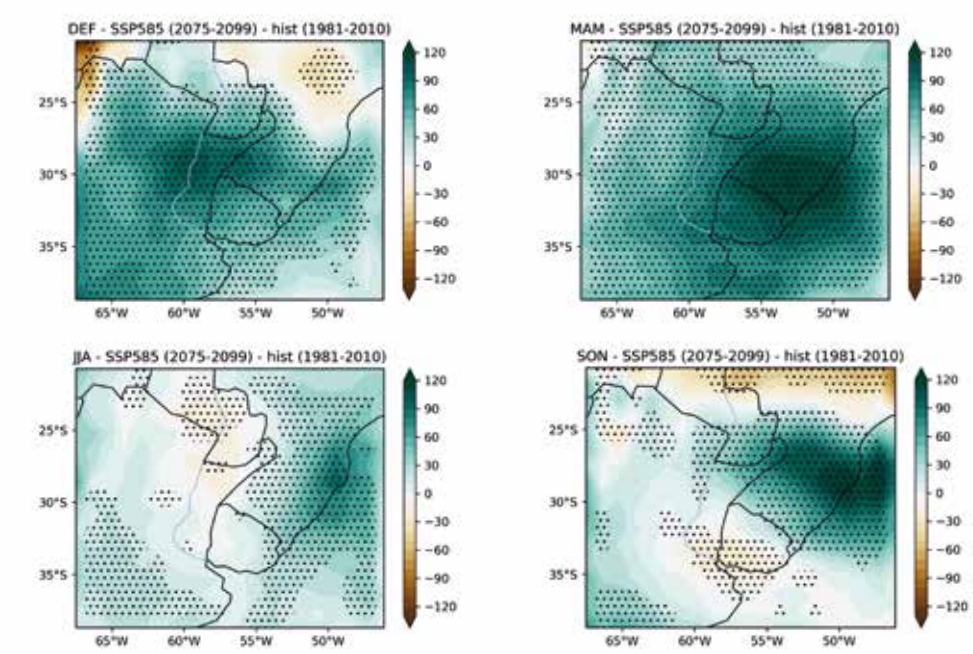
[14] Marcelo Barreiro, Fernando Arizmendi, Romina Trinchín (2019): *Variabilidad y cambio climático en Uruguay*. Department of Atmospheric Sciences, Physics Institute, Faculty of Sciences, University of the Republic. Technical staff training material for national institutions. MVOTMA-UDELAR agreement. PNUD URU/16/G34 project. Available at: <https://www.dinama.gub.uy/oan/documentos/Variabilidad y cambio clim%C3%A1tico en Uruguay. Material de capacitaci%C3%B3n dirigido a T%C3%A9cnicos de Instituciones Nacionales1.pdf>.

Precipitations

Future projection of mean annual rainfall throughout the country shows a high inter-annual variability overlapping with a positive gradual trend. Depending on scenario and model applied, the accumulated annual rainfall for Uruguay shows a variation between -5 % and 10 % for a short-term horizon, and between -7 % and 35 % for a long-term horizon. Although the trend is upwards, the range includes negative numbers, which would indicate a decrease in the annual accumulation.

The increase in the accumulated total is accompanied by an increase in the frequency of extreme rainfall events and a decrease in the number of days with light rain by the end of the 21st century. These changes are greater for scenarios with a greater use of fossil fuels.

FIGURE 2
Change of rainfall projections for 1981 2010 in CMIP6 models under a SSP585 scenario for a long-term horizon in all seasons. Black dots indicate regions where at least 7 of the 10 models coincide in the direction of the change. Source: Barreiro *et al.* (2021). [15]

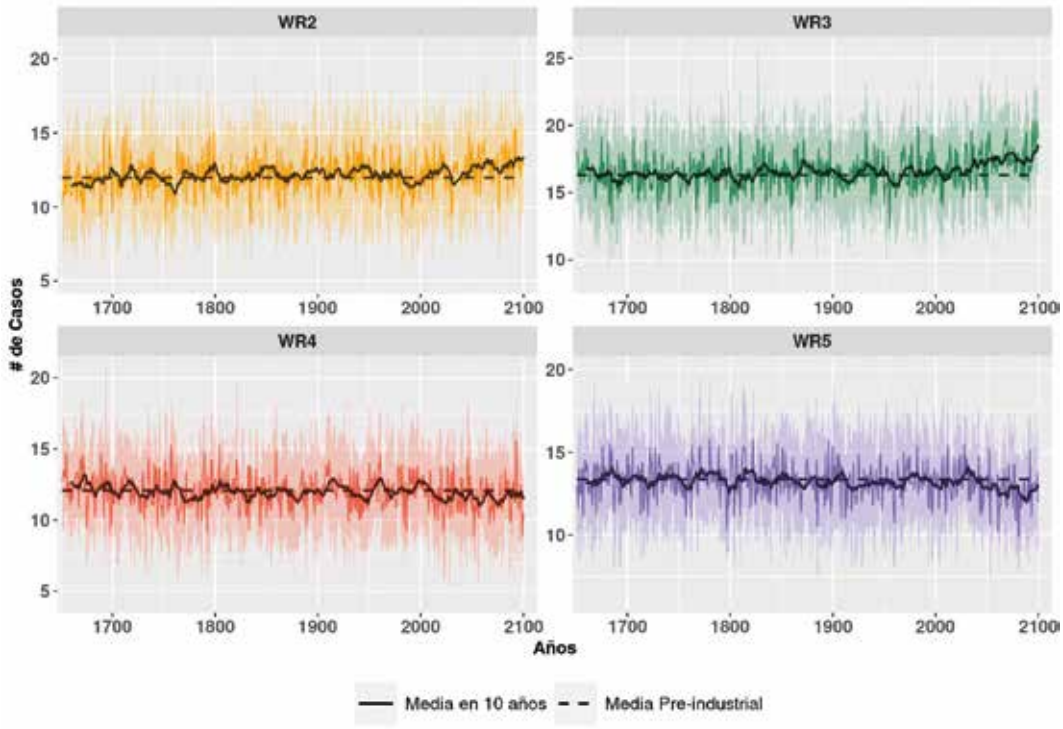


Winds

Climate model projections indicate future changes in recurring circulation patterns. Results under the SSP585 scenario indicate that trends for winters in the 21st century would continue as detected for the last 70 years. This means that there would be a decrease in the frequency of low-pressure systems and southern winds occurring in southern Uruguay, together with an increase in cyclones and anti-cyclones over the Atlantic Ocean. Therefore, an increase in the number of extreme wind events may be expected, particularly in winter in the south of Uruguay.

[15] Marcelo Barreiro, Fernando Arizmendi, Romina Trinchín (2021): Análisis del clima y escenarios de cambio y variabilidad climática en Uruguay, Faculty of Sciences UDELAR, INUMET. PNUD-UDELAR agreement. URU/18/002 project *Integración del enfoque de adaptación en ciudades, infraestructura y ordenamiento territorial en Uruguay.*

FIGURE 3
Frequency evolution of regional recurring patterns 2, 3, 4 and 5 for winter, according to an ensemble of 8 CMIP6 models. The ensemble mean value is shown in a medium shade and a 10-year smoothing of the series in dark shade. Dispersion of the ensemble is shown in the lighter shade. Each model series comprises 200 years of pre-industrial period, a historical period (1850- 2014) and the projection for SSP585 scenario (2015-2100). Source: Barreiro *et al.* (2021).[16]



2.b. Vulnerabilities

According to IPCC (2014)[17], vulnerability is the propensity or predisposition to be adversely affected. Addressing it may be based on sensitivity, defined as the set of characteristics which confer the disposition to be affected, or on its adaptive capacity, i. e.: the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. This is one of the interacting factors when defining climate change risk, together with exposure and climate hazards.

Climate hazards for Uruguay cities are a set of effects and impacts which have intensified as a consequence of global warming.

The rise of mean and extreme temperatures includes an increase in number and duration of heat waves. This will affect urban areas with a higher building density and vegetation deficit where urban heat islands may happen, problems with the supply of or demand for water and energy may arise, as well as public health issues related to heat, cold and associated conditions, including vectors proliferation.

The increase in precipitations shown by projections --together with its own peculiarities and changes associated with large scale phenomena which may even affect the number and duration of droughts-- suggests that water and surface run-off will remain to be critical for cities due to problems associated, such as floods, impact on infrastructure, effects on climate-dependent activities, problems with water quantity and quality, and pollution.

[16] Marcelo Barreiro, Fernando Arizmendi, Romina Trinchín (2021), op. cit.

[17] IPCC, 2014. Climate Change 2014: Impact, adaptation and vulnerability - Summary for Policymakers. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea y L.L. White (eds.)]. World Meteorological Organization, Geneva, Switzerland, 34 pages.
Available in: https://www.ipcc.ch/site/assets/uploads/2018/02/ar5_wgII_spm_en.pdf

The increase in extreme winds frequency affects cities and their setting in aspects such as food production, infrastructure and buildings stability, continuity of activities and safety of individuals.

In coastal areas, the combination of changes in winds and precipitations with the rising of sea level increases the risk of floods and erosion due to overflows, tidal waves, loss of beach sands and cliff recession, thus affecting activity, ecosystems and key urban infrastructure.

Such issues have a dissimilar impact and higher costs fall upon the most vulnerable cities and populations. According to IPCC (2014), vulnerability is multidimensional. This is a consequence of social realities such as income inequality, unequal opportunities and access to services, gender discrimination, social stratification, ethnicity, disabilities and age. Some communities are more vulnerable than others. Differentiated risks determine fewer opportunities to develop the necessary adaptation skills to cope with a constantly changing climate which intensifies extreme temperatures and impact and frequency of climatic events.

Exposure characterisation was based on information available for the whole country and over the 2005-2018 period about the influence of extreme climatic events that cause emergency response in urban and rural areas (Table 1). Data were statistically processed to reflect this information in cities.[18]

TABLE 1
Total damage by type of climatic event 2005-2018. Source: Robaina y Pastorino (2021) from Desinventar database (SINAE).

TYPE OF DAMAGE		FATALITIES	EVACUEES	SELF EVACUATED	DAMAGED HOUSING
TYPE OF EVENT	Flood	1	53.129	65.781	21.033
	Heat Wave	0	0	0	0
	Cold Wave	2	50	0	0
	Storm	36	8.620	490	7.359
	Tornado	5	353	250	1.638
	TOTAL	43	62.152	66.521	30.030

Assessment was made for informal settlement areas in the cities, average of deceased and total evacuees due to climate extremes every 10,000 inhabitants, percentage of people on flood areas, average of affected houses every 10,000 inhabitants, and vital infrastructure exposed to flood risk.

Geographical distribution of damage showed a higher incidence in some departments which are frequently affected by floods.

Distribution of climatic events over the period of 13 years under consideration does not lead to the identification of a behaviour pattern nor of damage caused. Still, some years may be singled out for a larger amount of evacuated and self-evacuated population.

[18] Gustavo Robaina and Gonzalo Pastorino (2021): Informe de vulnerabilidad al cambio y variabilidad climática, URU/18/002 project *Integración del enfoque de adaptación en ciudades, infraestructura y ordenamiento territorial en Uruguay.* Based on data analysis of Desinventar (SINAE).

Cities with the highest figures of evacuated and self-evacuated population coincide with cities where floods occurred, which confirms the need to prioritise such events. These can be found in different departments and cities, and they are associated with damage to housing and livelihoods, risk of pollution-related diseases and vectors associated with water. The cases with the highest fatality rates are associated with storms, especially thunderstorms or strong wind gusts, where major damage is produced in short periods. No data are available regarding effects of heat waves. Conversely, there are data logs for fatalities and evacuees caused by cold waves. Conditions in Uruguay are favourable for tornadoes, and a need to strengthen prediction and alerting capacities for cities has been identified. During the period under consideration two tornadoes have been registered in populated areas.[19]

Analysed data show that cities with settlements on flood areas are distributed along the banks of different water bodies all over the country. The exposure probably originated from not considering flood risk at the time of planning. The reasons for this are yet to be determined, but the lack of historical records could have influenced. Settlements with the highest percentage of people exposed are located in low-lying areas of the Río de la Plata coastal zone. The fact that there are several cities with relevant figures in other areas justifies the need for measures to reduce exposure to flooding in NAP-Cities, in line with existing public policies.[20]

The period's annual average of homes damaged by extreme events shows that the most damaged areas are those where evacuations and deaths occurred. Particularly noteworthy is the case of the 2016 tornado, where significantly high figures reflect around 1.800 damaged homes. Additionally, there are five cities with values between 27 % and 46 % damaged homes.

Sensitivity to climate change has been assessed in 42 cities of more than 10,000 inhabitants. This was done through a set of indicators, such as poverty rate, labour informality rate (associated to quality of income, health and social security coverage), and the rate of people who have completed lower secondary education (which provides information on local labour force, as it grants the means to address a crisis and to manage climate associated risks). The dependency rate was also assessed for people under the age of 15 and over 65, together with other attributes reinforcing existing inequalities such as social evaluation of disability --with urban design limiting accessibility for essential activities such as circulation--, ethnic background --with a negative impact on opportunities for population groups of Afro-descendants-- , and gender inequalities --which increase female vulnerabilities--.

Analysis of these indicators (poverty rate, labour informality, less basic education, higher degree of dependency, higher percentage of disabled persons, Afro-descendants, and female-headed single parent households) shows that 3 out of 42 analysed cities belong to the upper third of cities with the highest values for six indicators, three for five indicators and six for four indicators. These cities belong to different regions of the country.

Evaluation of habitat conditions (buildings, infrastructures, public services) also provides information on the population's sensitivity. Work was done based on their relationship with urban areas corresponding to informal settlements, house density data, materiality and habitability conditions, land tenure and ownership status, accessibility to basic services, such as drinkable water and sewage, and availability of social services (healthcare, educational and public care centres).

The largest informal settlements of the country are located in cities along the Uruguay River, on the Montevideo metropolitan area, along the Brazilian border, in the centre of the country and on coastal areas of the Río de la Plata and the Atlantic Ocean. Although they may differ in size, it can be said that informal settlements are a reality throughout the country. Data confirm that unsatisfied basic needs (UBN) of building material, water and sewage are factors that increase sensitivity in some of these cases.

[19] Gustavo Robaina and Gonzalo Pastorino (2021), op. cit.

[20] Gustavo Robaina and Gonzalo Pastorino (2021), op. cit., based on information from MA-DINAGUA.

The adaptive capacity of communities involves the development of land planning instruments and processes, ecosystem services, and the ability for practical implementation of changes in the habitat as a response to climate risk and to address emergencies and disasters. Some indicators were: public open space per capita, total public open space and its population, percentage of green and blue spaces out of the total urban area, and the contribution to providing relevant ecosystem services for adaptation around each city.

The density of healthcare, educational and public care centres in relation to total users provides information about coping capacities. An assessment was conducted for accessibility to services and public infrastructure in primary, secondary and vocational education, given its importance in relation to climate change education and awareness as well as their role as infrastructure, support and care sources to the youngest population during emergencies.

Analysis of these coping capacities was complemented with an assessment of institutional response capacities in local emergencies and disaster. To do so, institutions were requested to build an index of institutional capacities, including the evaluation of aspects such as political level, technical and administrative capacities and available human resources.

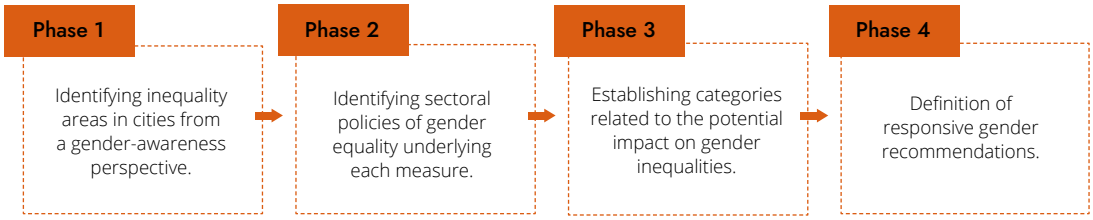
Systematised data show a variety of situations and provide information to develop and promote adaptation to climate change and variability and to increase the presence of green and blue infrastructures and public spaces - well-distributed throughout the city and its environment-, in order to boost its ecosystem services and its role in adaptation. Quantification of the availability of healthcare, educational and public care centres allows to identify the need for improvement. Assessment of emergency and disaster coping capacities provides initial information, which may be later followed up through implementation.

The results of such analysis provide data for an informed decision making of programming and implementation of national and local adaptation actions.

2.c. Gender

As a consequence of different gender-based social standards, rules and cultural imposition, the degree of vulnerability between men, women, elderly, boys, girls and teenagers is different in terms of climate change and the many ways they experience cities. One of the distinguishing features of this Plan is its strong commitment to incorporating generational and gender perspectives with a human rights-based approach. NAP-Cities measures have been categorised according to their potential transformation impact on urban gender inequalities based on three analysis areas: a) accessibility to services (mobility, infrastructure and public spaces), b) political participation and c) economic inclusion.

FIGURE 4
Phases in incorporating and widening gender perspective

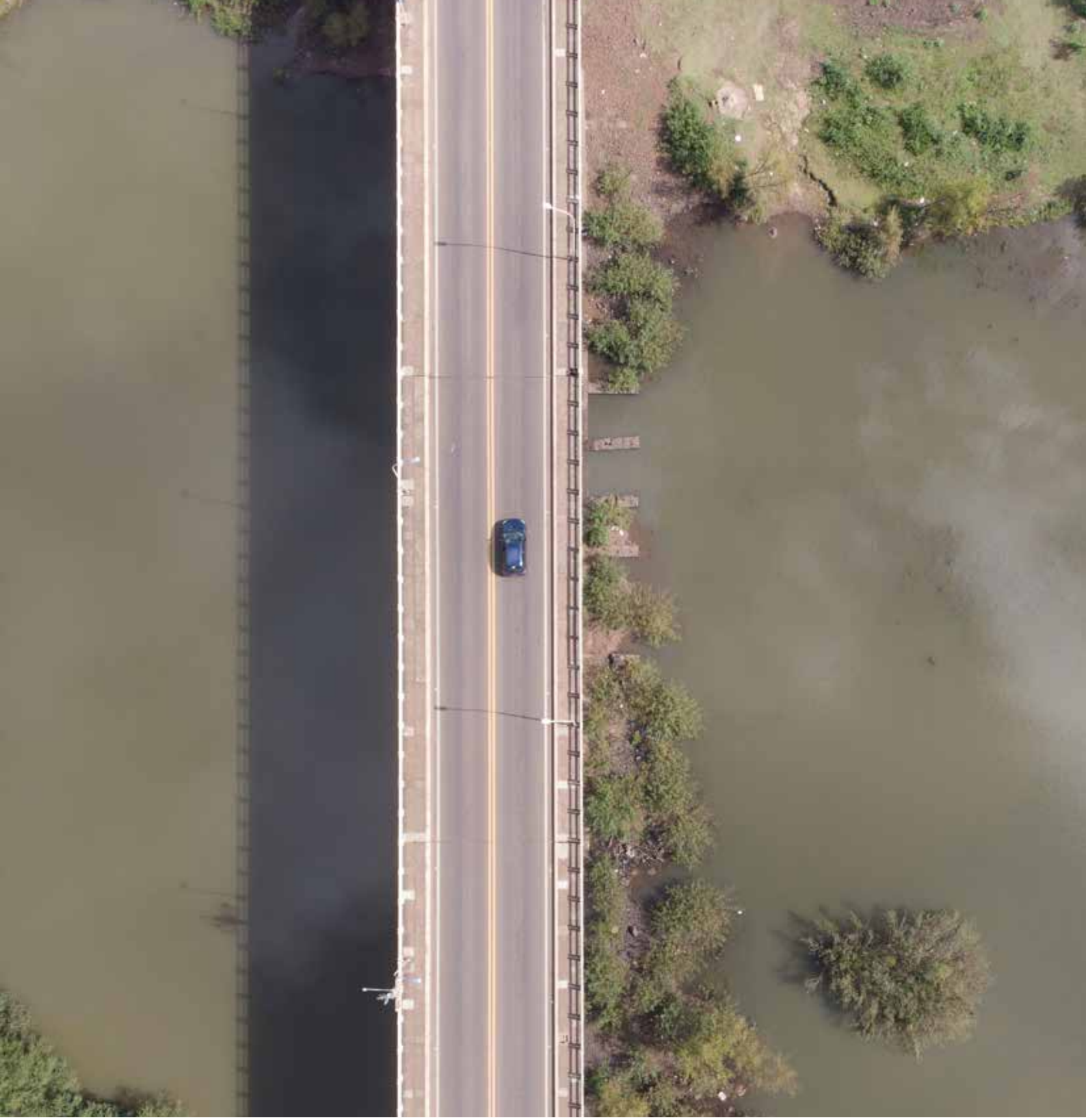


Recommendations are made to incorporate and widen the perspective in city planning along a four-phase process as shown in Figure 4 with the purpose of incrementing independence of women in the economic, physical and decision-making areas in order to improve their adaptation capabilities.

These recommendations were applied to the NAP-Cities measures, which led to adjusting the formulation process meant to boost their impact on gender inequalities and to redefine the recommendations for implementation.

2.d. Information Gaps and Training

During consultations and interviews along the preparation process of this Plan, several key areas were detected in relation to strengthening the capacities associated with its implementation phase. Information gaps and lack of articulation as well as the need for specific training in different subjects were identified. During the development of NAP-Cities there was progress in the generation of knowledge and strengthening of capacities to solve the information gaps that had been identified. This was made through studies, preparing guidelines and procuring supplies for the planning stages, as well as through implementing pilot experiences in several issues agreed with participating institutions. NAP-Cities acknowledges the importance of solving gaps and lack of information and knowledge, and of addressing the need for training. To that effect, it incorporates measures and actions along a specific strategy, identifies key actors in the implementation stage and suggests institutional agreements to generate, maintain, analyse, process, make available and activate information for planning and management action.



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Concordia International
Brigde, Artigas.
Carlos Lebrato

3

Uruguay Implementation Strategy for NAP Cities

3.a. Principles, Conceptual Framework, Objectives and Strategic Lines

The implementation strategy suggests a general structure for NAP-Cities as illustrated in Figure 5: guiding principles, conceptual framework, general and specific objectives and strategic lines for the implementation of adaptation measures.

FIGURE 5
NAP-Cities Structure

Guiding Principles

- Adaptive and flexible.
- Generation of knowledge and information as a public asset.
- Sustainability.
- Gender and generational perspective with a human rights based approach.
- Participation.
- Transparency and open government.
- Decentralisation.

Conceptual Framework

- Adaptation with a territorial approach.
- Integrated management of water resources.
- Nature-based solutions.
- Adaptation-mitigation co-benefits.

General Objective

To reduce the vulnerability of communities to the effects of climate change and variability by creating adaptive capacities and resilience in cities, infrastructures and urban environments, integrating adaptive measures to policies, to new and pre-existing programmes and corresponding activities, and to national and local planning processes and strategies with the purpose of improving the population's quality of life.

Specific Objectives	Strategic Lines
To increase the adequate incorporation of mitigation and of adaptation to climate change and variability in urban and land planning and landscape.	**SL1** Land planning and city planning. **10 measures**
To adequately integrate mitigation and adaptation to climate change and variability and ecosystem services to the design, construction, management and maintenance of households, infrastructure, equipment and public service provision.	**SL2** Changes of urban habitat. **12 measures**
To consolidate the Integrated Risk Management of disasters from a prospective, corrective and compensatory approach for the recovery and for making decisions that will allow for a "better reconstruction" and that will reorientate planning processes by acting on pre existing risk causes.	**SL3** Integral risk management for emergencies and disasters. **4 measures**
To strengthen capacities related to mitigation and adaptation to variability and climate change in cities, communities and human settlements at national, departmental and local levels by training human resources and financing actions, as it may correspond in terms of budgetary competencies at the respective levels of government.	**SL4** Strengthening capacities, awareness and communication. **12 measures**
To promote sustainable production and consumption methods by increasing the efficiency in the use of resources.	**SL5** Transition towards sustainable production and consumption methods. **3 measures**

Management mechanism: [SNRCC (MA DINACC)] · [(Management team MA MVOT) Adaptation Working Group] · [Working Group PMRV] · [Action Plan Actors].

Monitoring and evaluation strategy: State of adaptation indicators-Action Plan progress indicators.

Financing strategy: Financial sources, mechanisms and alternatives.

NAP-Cities is built up from a series of postulates which shall act as governing principles and will guide the different phases. It shall be flexible and adaptive, allowing for continuous feedback. It considers generation of knowledge and information to be a public asset, accessible to society. It is governed by the sustainability principles in the 2030 Agenda for Sustainable Development, takes gender and generational perspectives into consideration and promotes informed participation of stakeholders as part of the framework of transparency and open government led by the country and strengthening local governments as main actors of adaptation in agreement with the decentralisation process.

There are four key concepts which underpin NAP-Cities. They refer to an approach of adaptation that is territorial, local, participatory and that is coordinated at multiple scales; integrated management of water resources and urban floods, understanding access to drinking water and sewage as fundamental human rights; nature-based solutions to protect, manage and sustainable restore natural or modified ecosystems which effectively and adaptively address social challenges by simultaneously granting benefits to human welfare and biodiversity and co-benefits derived from mitigation and adaptation sound policies.

The general objective of NAP-Cities is to reduce the vulnerability of communities to the effects of climate change and variability by building adaptive capacity and resilience in cities, infrastructures and urban environments, integrating climate change adaptation into relevant new and existing policies, programmes and activities, and into development planning processes and strategies in order to improve the population's quality of life.

The five-year programmed Action Plans set its time horizon on year 2050.

There are five specific objectives (SO) which contribute to achieving the general objective:[21]

- **SO1.** To increase the adequate incorporation of mitigation and adaptation to climate change and variability in urban and land planning and landscape.
- **SO2.** To adequately integrate mitigation and adaptation to climate change and variability and ecosystem services to the design, construction, management and maintenance of households, infrastructure, equipment and public service provision.
- **SO3.** To consolidate the Integrated Risk Management of disasters from a prospective, corrective and compensatory approach for the recovery and for making decisions that will allow for a "better reconstruction" and that will reorientate planning processes by acting on pre existing risk causes.
- **SO4.** To strengthen capacities related to mitigation and adaptation to variability and climate change in cities, communities and human settlements at national, departmental and local levels by training human resources and financing actions, as it may correspond in terms of budgetary competencies at the respective levels of government.
- **SO5.** To promote sustainable production and consumption methods by increasing the efficiency in the use of resources.

Inasmuch as adaptation is a long-term task, the implementation of Strategy 2050 is carried out through five strategic lines (SL) which group 41 medium- and long-term measures.

- **SL1.** Land planning and city planning.
- **SL2.** Changes of urban habitat.
- **SL3.** Integral risk management for emergencies and disasters.
- **SL4.** Strengthening capacities, awareness and communication.
- **SL5.** Transition towards sustainable production and consumption methods.

[21] The Plan's specific objectives and strategic lines derive from the National Policy on Climate Change, particularly from the three lines of action in Paragraph 11, which refer to promoting the development of cities, communities, human settlements and sustainable and resilient infrastructures that contribute to reducing greenhouse gas emissions facing climate change and variability. They also integrate actions regarding Paragraph 10, which refers to strengthening climate-associated risk management, and Paragraph 12, as regards action with ecosystems, ecosystem services and sustainable production and consumption practices.

3.b. Measures

NAP-Cities decided to review existing actions, identify needs and plan adaptation actions to strengthen, enhance, broaden and ensure coherency in measures of public policies for adaptation. Consequently, measures must be interpreted as a strategic reference framework for decision making processes in the hands of stakeholders in charge at each level of government.

The 41 measures described in Table 2 are contained in NAP-Cities detailed sheets which include a description of their contribution to adaptation, a list of actions to be taken for their implementation, identified key actors and other institutions recommended for participation, climate hazard to which they respond, financing options, their category associated with their potential impact on gender inequality and a set of recommendations for incorporating and broadening gender and generational perspectives with a human rights-based approach.

Additionally, there are comments on the strategic alignment of each measure with international commitments and other national mechanisms such as current policies, plans and strategies.

TABLE 2
Description of NAP-Cities measures

Nº	MEASURE NAME	MEASURE DESCRIPTION
Strategic Line 1. Land planning and urban planning		
Measure 1	Strengthen the incorporation of strategies for reduction of risks associated to land and urban planning climate projections.	Move ahead in the application of techniques and methodologies for assessing climate projections and multiple associated hazards, risk assessment and adaptation strategies to be incorporated into the processes of land planning and urban planning.
Measure 2	Strengthen planning processes in the integrated management of water resources and its coordination with land, environmental and urban planning.	Strengthen preparation and implementation processes of water resources integrated management plans, with a multi-scale basin approach, including surface and underground waters, as well as risks associated to climate change and variability. Improve articulation between these plans and decentralisation, land planning and sustainable development policies.
Measure 3	Intensify protection and restoration of ecosystems in planning	Strengthen the articulation between land planning decisions and the strategies and tools for protecting ecological integrity of aquatic and terrestrial ecosystems, reclaiming the value and preserving key ecosystems such as temperature regulation, coastal defence, flood buffering, regulation of water run-off, preserving the hydrological cycle, sequestration of pollutants in water, air and soil, provision of food and other benefits derived from biodiversity.
Measure 4	Strengthen the incorporation of a climate risk management approach when planning public services for drinkable water, sewage and rainwater drainage.	Intensify actions of adaptation to climate change and variability and reduce associated risks through the analysis of climate projections when planning public services for drinkable water, sewage and rainwater drainage in Uruguayan cities.

Nº	MEASURE NAME	MEASURE DESCRIPTION
Measure 5	Strengthen the incorporation of strategies for reducing climate risks when planning sectoral activities and investment for development.	Promote the design of strategies in sectoral development plans for reducing climate risks, including planning of infrastructure and services (public and private).
Measure 6	Strengthen access to urban land public policies, with an approach for risk management and sustainable use of natural resources.	Strengthen public policies for better availability and sustainable use of urban land in social housing and urban development programmes by incorporating a climate risk management approach which include climate and demographic projections, as well as sustainable use criteria for natural resources.
Measure 7	Progress in climate change response at national, regional and local levels.	Strengthen the planning of climate change response, with national, regional and local level articulation, and move ahead with its implementation, evaluation and updating stages. Extend climate action to other regions and cities of the country with a territorial approach and reclaim the value of participation and lessons learnt in past or current experiences.
Measure 8	Strengthen analysis of risks derived from climate projections in environmental impact assessment of human activities.	Incorporate analysis of risks derived from climate projections in environmental evaluation and environmental management plans of activities, projects and works, both, for those under the national environmental regulations, as well as for those which aren't but are subject to other socio-environmental management systems.
Measure 9	Progress in the incorporation of climate change perspective in strategic environmental assessment during the preparation of policies, plans and programmes.	Advance in methodological development and promote the incorporation of strategic environmental assessment under a climate change perspective when designing policies planes and programmes for sustainable development of activities involving cities and infrastructure.
Measure 10	Progress in integrated urban planning that includes sustainable urban mobility.	Reinforce integration of sustainable urban mobility for urban planning, acknowledging interrelation between land use, mobility and urban configuration. Foster city models which reduce the need for long journeys by car, and instead facilitate displacements which can be done either walking, riding or using public transport.

Nº	MEASURE NAME	MEASURE DESCRIPTION
Strategic Line 2. Changes in urban habitat		
Measure 11	Progress in urban habitat improvement and universal access to public services.	Intensify strategies for improving urban areas and the population's universal access to public services under an integral approach.
Measure 12	Boost the role that vegetation and public spaces play in cities for a better performance in relation with climate.	Increase the presence of vegetation and absorbing soil, as well as the availability of public spaces, applying full habitability, access and enjoyment criteria.
Measure 13	Increase the efficiency in the use of resources in public spaces and infrastructures in cities.	Increase the efficiency in the use of resources in public spaces and infrastructures in cities, considering initial, operational and maintenance costs, structural stability, life cycle analysis of components, energy efficiency and a rational use of water through the incorporation of technology and management solutions.
Measure 14	Strengthen the development of green and blue infrastructure in cities.	Promote the incorporation of green and blue infrastructure in cities. This implies a systemic approach of natural and semi natural spaces, urban green areas, water bodies and other environment and landscape elements, strategically designing and managing them as a network to facilitate natural processes in multiple territorial scales.
Measure 15	Intensify improvements in public woodlands and green spaces management systems.	Strengthen the capacities of departmental and municipal governments, and promote the incorporation of strategic and planning tools for an integral, efficient and sustainable management of urban woodland and public green spaces, in order to boost their contribution to climate adaptation in cities.
Measure 16	Boost the creation and management of green areas located in high flood risk areas in the city.	Extend the creation and management of resilient green areas at flood risk, such as parks, squares, recreation areas and other urban green areas, with plain areas with a high flood risk. Articulate this strategy with environmental actions protecting, recovering and maintaining ecosystem services which benefit cities.
Measure 17	Progress in the development of urban solutions adapted to climate for transitioning into sustainable mobility.	Incorporating technological and design solutions adapted to climate for sustainable mobility in infrastructure, public spaces, buildings, equipment, vehicles and management systems for mobility and public transport.
Measure 18	Improve integral management of urban solid waste.	Promote and implement improvements in technology, infrastructure and management of urban solid waste with the purpose of achieving management with a climate risk approach. This measure is complementary to the development of land use policies, climate change mitigation and boosting sustainable consumption and circular economies.

Nº	MEASURE NAME	MEASURE DESCRIPTION
Measure 19	Incorporate technical requirements into construction regulations to reduce risk and improve performance facing climate challenges.	Review and update technical requirements for construction in order to improve performance facing climate conditions and associated risk reduction.
Measure 20	Implement policies to improve climate performance of existing buildings.	Strengthen public policies to implement design, construction and financial solutions for the adaptation of buildings exposed to climate risks. Promote the participation of the private sector in these processes.
Measure 21	Strengthen public policies related to relocating population dwelling on areas that are unsuitable for human settlement.	Strengthen the implementation of relocation plans into safe urban land for housing on areas unsuitable for human settlement by incorporating criteria for climate risk management and improving climate performance in buildings and public spaces in coordination with other land use public actions, urban management, risk assessment and management and access to urban land.
Measure 22	Promote the incorporation of technological solutions to improve buildings climate performance.	Promote the incorporation of technological solutions and management and certification systems which can contribute to improve the buildings performance in relation to climate change and variability in the public, private and residential sectors in issues such as vegetation-based solutions, thermal comfort, energy efficiency, sound water management and risk reduction for winds, floods and rainfall.
Strategic Line 3. Integral management of emergency and disaster risks		
Measure 23	Intensify planning of integral urban risk management, incorporating hazards derived from climate change and variability.	Strengthen integral risk management by incorporating assessment of multiple hazards derived from climate change and variability in cities. This shall be done through continuous improvement of methodologies, inter institutional articulation and social participation.
Measure 24	Strengthen articulation and expanding coverage of early warning systems.	Strengthen existing early-warning systems by intensifying inter-institutional coordination, improving generation and management of information, progressing in methodological and technological development, and allocating additional resources to cover more cities and subjects. Incorporate new hazard response systems related to climate change and variability.
Measure 25	Intensify articulation in city planning and management with adaptation to climate change and variability in the health sector.	Strengthen the articulation between institutions and urban planning and management areas with the Ministry of Public Health and all institutions within the health sector with the purpose of integrating specific lines of climate action and urban integral risk management.
Measure 26	Improve infrastructure and management systems of public services in order to ensure continuity under emergency situations and climate extremes.	Review and update the infrastructure of public services in cities and their management systems under new design and operation standards which consider the risk of climate change affectation and incorporate measures to prevent collapse and interruptions, and ensure operational continuity during climate extremes and emergency situations.

Nº	MEASURE NAME	MEASURE DESCRIPTION
Strategic Line 4. Strengthening capacities, awareness and communication		
Measure 27	Promote technical and academic studies which contribute to improve the evaluation of urban risks derived from climate change.	Promote the generation of knowledge, techniques and methodologies that contribute to improve the evaluation of risk and impact derived from climate change and variability in cities through financing, incentives and agreements which enable basic and applied research in order to solve knowledge gaps.
Measure 28	Foster the development and dissemination of knowledge on ecosystems and on green and blue infrastructure.	Apoyar el desarrollo y la difusión de investigaciones, de sistematización de experiencias y trabajos de corte propositivo que contribuyan a conocer en mayor profundidad y poner en valor los ecosistemas terrestres y acuáticos, el arbolado público, los espacios verdes y sus procesos naturales.
Measure 29	Foster the generation of information and knowledge to improve resilience to extreme hydro-meteorological events and disasters.	Support research, development and innovation with agreements, funding and support lines for studies in the academic and industrial sectors, in coordination with the need for knowledge and information in public institutions.
Measure 30	Promote research on solutions for construction, technology and suitable materials to improve performance and infrastructure in buildings to face climate change.	Apoyar la investigación sobre el desempeño frente al clima de materiales, tecnologías y sistemas constructivos utilizados en infraestructuras y edificaciones, incluyendo proyecciones climáticas y enfoques, como análisis del ciclo de vida y economía circular.
Measure 31	Increase knowledge about climate risk in institutions in the public sector.	Intensify training and awareness on adaptation to climate change and variability and associated risk management among technical staff in national public institutions, departmental and municipal governments.
Measure 32	Strengthen technology and capacities for generating data, information and knowledge related to adaptation.	Strengthen the capacity to generate, manage, provide and apply quality information to decision making processes in institutions which provide climate, hydrological, geographical and statistical data, in public institutions from the National Climate Change Response System, and in institutions participating in the planning and management of cities and infrastructures.
Measure 33	Intensify the incorporation of contents related to climate change and variability in professional education of those who participate in urban planning, construction and management processes.	Strengthen training in climate change adaptation and risk management in the syllabus of tertiary undergraduate and graduate courses, as well as in continuing professional education in key areas related to urban planning, management and natural resources.
Measure 34	Intensify land planning processes through methodological support in the incorporation of the environmental dimension, risk reduction and climate change adaptation.	Develop and update methodologies, and create new tools in order to improve the incorporation of the environmental dimension, risk reduction and climate change adaptation to land planning tools.
Measure 35	Increase availability of updated guidelines and handbooks for dealing with adaptation to climate change and variability in buildings and infrastructure.	Update guidelines and handbooks to improve performance of buildings and infrastructure in relation to climate change and variability. Extend availability of these tools as a way to provide support in the application of new regulations and calculation rules.
Measure 36	Incorporate studies on climate, climate change and its risks into formal and informal education.	Intensify training actions in discipline and subjects related to the study of climate, climate change and associated risks at different formal and informal levels.

Nº	MEASURE NAME	MEASURE DESCRIPTION
Measure 37	Promote awareness of civil society through public awareness campaigns on climate change.	Intensify awareness and dissemination actions for different target audiences on issues related to climate change and variability, associated risks and mitigation and adaptation measures in cities.
Measure 38	Increase the use of ICTs for adaptation to climate change and variability.	Increment the use of information and communication technology (ICT) to generate, manage and disseminate information and to facilitate social participation in adaptation and climate change related issues.
Strategic Line 5. Transition towards sustainable production and consumption methods		
Measure 39	Prioritise green-job creation towards development under sustainable production and consumption paradigms.	Identify and prioritise areas which contribute to development under sustainable production and consumption paradigms, as well as to the greening of cities and infrastructure in public and private organisations by prioritising the creation of relevant jobs.
Measure 40	Promote sustainable production and consumption activities.	Promote the transition into more inclusive, low-carbon and environmentally responsible new production and consumption formats.
Measure 41	Promote urban agriculture and agro-ecology.	Foster urban and suburban agriculture on agro-ecology bases.

PHOTO
Drone view of Canelones city.
Carlos Lebrato

4

Action Plan for the implementation of the adaptation strategy

In order to gradually implement the above mentioned 2050 Strategy, the 2021-2025 Action Plan was prepared. This Action Plan considers long-term actions in the NAP-Cities, puts forward goals for the inception period right after its adoption with progress indicators and identifies reporting institutions.

It was prepared in consultation with involved institutions, considering accomplishment of programmed activities for the period, as well as other planning instruments and existing international commitments.

Goals for year 2025 aim at stimulating implementation and contributing to the achievement of each measure, though they constitute only a part of actions necessary for that purpose. After generating those first goals and an adequate monitoring of results, NAP-Cities plans the programming of new five-year action plans, which may be more ambitious and increase their scope at the time they allow for redefining and adjusting the Plan itself.

4.a. NAP-Cities coordination framework

Given the multiplicity of stakeholders, NAP-Cities plans inter-institutional coordination structures for a sound implementation.

- The National Climate Change Response System and its Coordination Group, chaired by the Ministry of Environment through the Climate Change National Directorate.
- The NAP-Cities driving group will be a Management Team comprising members from the National Directorates of the Ministry of Housing and Land Planning and the Ministry of Environment and will continue the work that the NAP-Cities Technical Committee carried out at its design phase. It will operate as a specialised team of the Workgroup for Adaptation from the National Climate Change Response System, which focuses on adaptation action and implementation of the National Adaptation Plans as a whole.
- The Workgroup for Programming, Monitoring, Reporting and Verification of the National Climate Change Response System is focused on the First Uruguay Nationally Determined Contribution and on National Policy on Climate Change, and will collaborate with the Management Team in the programming of action plans and evaluation of adaptation in cities through NAP-Cities impact indicators.

These groups will establish the necessary articulation with all institutions involved in urban adaptation as identified in the measures.

4.b. 2025 Roadmap. Phases, stages and activities required for implementing the plan

Table 3 shows an implementation roadmap of the first Action Plan with a 2025 time horizon for the four years following its completion.

TABLA 3
Hoja de ruta para la implementación del PNA Ciudades

PHASE	STAGES AND ACTIVITIES	ACTION PLAN 2021-2025			
		2021-2022	2023	2024	2025
IMPLEMENTATION	Disseminate the contents of NAP-Cities so that institutional, sectoral and social stakeholders may embrace it and make an impact on achieving objectives and goals.				
	Make institutional agreements for implementing, and defining roles and responsibilities.				
	Strengthen institutional capacities for implementation.				
	Prepare the 2025-2030 Action Plan based on the evaluation of the 2025 Plan, its achievements and new issues / institutions / knowledge.				
	Prioritise adaptation measures from the 2030 Action Plan. Design programmes and projects.				
MONITORING AND EVALUATION	Review of monitoring and evaluation indicators in the NAP-Cities.				
	Establish baselines for indicators.				
	Define internal reporting, monitoring and verification follow up mechanisms.				
	Report monitoring and evaluation system results.				
FINANCING	Assess financing options for climate change adaptation at international levels.				
	Identify national budget lines allocating funds to adaptation activities for the 2021- 2025 period.				
	Reach inter-institutional agreements towards budgetary prioritising of climate change and variability adaptation measures.				
	Design a mechanism to raise international funds for implementing climate change and variability adaptation measures.				

PHOTO
Port of Piriapolis
Carlos Lebrato

5
Plan funding

Damages and losses derived from climate extremes have serious economic consequences with associated costs that are expected to rise as average global temperature keeps increasing. Economic resources are insufficient to respond to present needs, and will become even scarcer as a greater proportion of the public budget is increasingly destined to investment and remedies after a climate extreme occurs. In order to reduce such loss, the country must invest in reducing the effects of climate extremes. Implementing climate change adaptation measures requires that all pertinent sources of resources and stakeholders get involved.

The adaptation measures funding strategy runs along three guiding lines:

1) Introduce climate change response in mainstream policies and programmes of public bodies, incorporating risk analysis to legislation and regulation processes, and planning, execution and implementation of investment projects in all sectors of the Uruguayan economy.
2) Modify the tax-and-duties system to promote production, activities with sustainable consumption methods and less environmental impact, and impose taxes to polluting or high environmental risk activities to promote a shift in the population habits within an urban environment and contribute to a sustainable use of natural resources.
3) Establish funding mechanisms in which all stakeholders may participate --from either public or private sectors, or from social and solidarity-based economy-- both for designing as well as for implementation, maintenance or financing processes.

NAP-Cities measures acknowledge prerequisites or conditions of possibility for funding. They have been classified into: a) measures which entail regulatory and legislative changes, b) measures which generate institutional enabling conditions, and c) measures which consist of investments on infrastructure and real estate.

Finally, several funding sources were identified for this purpose: public budget for operating or investment projects; specific taxes; international cooperation; participation of private companies; participation of real estate owners and stock market.

PHOTO
Air view of Isla de la Sirena, Atlántida.
Carlos Lebrato

6

Monitoring and evaluation

In order to measure results, a monitoring and evaluation strategy is put forward, integrating public tools available in the country, such as specialised agencies and evaluation and monitoring units from institutions involved in the implementation of this proposal.

The strategy is based on selecting a set of indicators designed to measure the impact of NAP-Cities, the results in terms of specific objectives, and the progress in terms of goals stated in the action Plans.

The monitoring and evaluation strategy will be effective insofar as it enables learning during the implementation process, as it allows for adjusting goals and resources allotted to actions planned in the strategic lines, selected measures and actions for compliance, and as it feeds into the design of new five-year action plans. Its implementation will offer opportunities to design indexes of exposure, awareness and adaptive capacity, as well as to build technical and methodological agreements to design an index to assess vulnerability to climate change and variability. Additionally, working with geo-referenced indicators at city scale whenever pertinent and feasible will offer opportunities for visualising and better identifying the adaptation status. During the design of NAP-Cities, some methodological approaches and pilot experiences have been carried out. These will remain available to feed in these processes within the institutions that will manage NAP and the monitoring and evaluation strategy.

The NAP-Cities visualising and interactive tools are under development at the institutions and are meant for planners, decision makers and communities. The objective is to enable enquiries about adaptation options for different issues in Uruguayan cities including previously generated geo-reference data.

Access to the National Adaptation Plan to Climate Change and Variability for Cities and Infrastructures in Uruguay (NAP-Cities) full version.


Ministerio
de Vivienda y
Ordenamiento
Territorial


Ministerio
de Ambiente


SNRCC
Uruguay

Annex 10

Annex 010

Progress on the National Climate Change Adaptation Plan for Uruguay's coastal zone

February 2020

SNRCC
Uruguay

MVOTMA
Ministerio de Vivienda
Ordenamiento Territorial
y Medio Ambiente

Design: Depto. Communication MVOTMA

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http://www.mvotma.gub.uy/napcostas

Caveat: The use of language that does not discriminate between men and women is one of our team's concerns. However, there is no agreement among linguists on how to do this in our language. In this sense, and in order to avoid the overload that would result from using o/a in Spanish to mark the existence of both sexes, we have opted to use the classic generic masculine.

The reference to this document is: MVOTMA-SNRCC (2020). National Plan for Adaptation to Climate Change in the Coastal Zone of Uruguay. Montevideo

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CONTENTS

NATIONAL COASTAL ZONE ADAPTATION PLAN

Introduction and scope

For more than three decades Uruguay has been committed to addressing the complex problem of climate change. It has done so by ratifying and adhering to the main international agreements, promoting policies, programs and plans at the national level and consolidating an inter-institutional work process within the framework of the National Climate Change Response System (SNRCC).

Adaptation constitutes, together with mitigation, a fundamental strategy that allows countries to be prepared for the effects of climate change; effects that, will last for a long time even if greenhouse gas (GHG) emissions are successfully reduced (IPCC, 2018).

During 2016, with the participation of more than 100 institutions, the National Policy on Climate Change (PNCC) was prepared within the framework of the SNRCC, which incorporates the main strategies in terms of mitigation and adaptation in Uruguay, there, the preparation of a National Adaptation Plan in Cities and Infrastructure was included as an implementation instrument.

Also in 2017, Uruguay presented in the framework of the Paris Agreement, the First Nationally Determined Contribution (NDC), a document that synthesizes the contributions assumed by the country to meet the provisions established in the Agreement and promote adaptation and mitigation in Uruguay as defined by the National Climate Change Policy[1] .

One of the contributions assumed in the CRC is that *by 2020 the National Coastal Adaptation Plan* (NAP) *will have been formulated, approved and implementation will have begun.* Although the country still has important tasks to develop this year to achieve the formulation of adaptation measures, it has been possible to identify the main strategies and multiple adaptation initiatives that are being implemented, involving various areas of the State in coordination with the departmental governments of the coastal zone, as well as the private sector, academia and organized civil society. This process also makes it possible to identify governance at the national, departmental and local levels, which is involved and actively participates in the construction of alternatives to solve urban problems that climate change and variability could exacerbate in the future.

The purpose of this document is to present, based on a synthesis of the actions that Uruguay has already begun to implement, a strategic orientation to deepen, expand, replicate and/or transform these experiences. Thus, for example, the measures successfully implemented in the coastal zone for the restoration of the dune system and coastal drainage, will be deepened in the future considering the new scenarios of climate variability and change.

[1] The National Climate Change Policy and Nationally Determined Contribution were approved by Executive Order 310/017 in November 2017.

The Coastal Adaptation Working Group within the SNRCC, once its integration and representation by SNRCC members is strengthened, will be able to provide the necessary inputs to develop a coastal adaptation financing strategy making the best use of available resources, as well as for complementary financing with public, private and/or international resources.

We hope that this document will serve as a reference and support to the SNRCC during 2020, to achieve the complete preparation of the National Plan for Adaptation to Climate Change in coastal areas to be submitted to the UNFCCC, in compliance with the contributions made by the country.

Summary and general considerations

In Uruguay, the approach to the climate issue has been characterized by the implementation of a cross-cutting approach to all public policies. Since the approval of the National Climate Change Policy (2016), the country has been prioritizing the advancement of climate action by foreseeing measures for the short, medium and long term in order to guide mitigation and adaptation actions, including those described in the First Nationally Determined Contribution and First Adaptation Communication of Uruguay to the Paris Agreement (2017).

Among the technical barriers identified to address the impacts of climate variability and change in the coastal zone are: the lack of quality data or access to existing data; the lack of standardized criteria, methodologies and tools for the assessment of climate change risks and for the implementation of adaptation or the definition of metrics and mechanisms for the evaluation of adaptation.

Among the institutional and social barriers, the problem is centered on the relevant national and local competencies on the coast and the lack of sufficient knowledge and capacities to address the problem, such as the scarce availability of human resources specialized in climatological and hydrological modeling. Mainly, the shortage in the type and quality of climate observations and the lack of sustainability of robust monitoring systems (30 years) in the coastal zone are highlighted.

Within the framework of the development of the NAP COSTAS, the SNRCC is committed to strengthening, at different levels, the technical and institutional capacities for medium and long-term planning and implementation of adaptation measures in the coastal zone of the departments of Colonia, San José, Montevideo, Canelones, Maldonado and Rocha. The process of generating the NAP COSTAS is conceived as a way of working that considers all concerns related to climate variability and change in decision-making processes.

Regarding the temperature over the Uruguayan territory, for the near horizon the models project between 0.5 and 1.6°C of warming with respect to 1981-2010, while for the far horizon the models project between 1.5 and 5.5°C with respect to 1982-2010 with different values depending on the scenario (SSP245: 1.5-3.0°C; SSP370: 2.2- 4.6°C; SSP585: 2.6-5.5°C).

At the seasonal level, it can be observed in the near horizon that in autumn and summer there is an east-west warming gradient with high values in the west coast, while in summer there is an east-west warming gradient with high values in the west coast, while in summer there is an east-west warming gradient with high values in the west coast.

that in winter the warming is more uniform throughout the national territory. At the same time, in the far horizon, the seasonal changes observed are very different. In summer, the SSP245 scenario shows a warming of approximately 2.5°C, while in SSP585 it would reach 4°C, expressed in an east-west gradient. In winter, warming is lower and ranges between 1.5-2.0°C are projected for the SSP245 scenario and between 2.8-3.5°C for SSP585, with the greatest changes occurring in the north of the country.

The accumulated annual rainfall over Uruguay has a large interannual variability between -5 and 10% for the near horizon and between -7 and 35% for the far horizon. Future projections show a gradual positive trend with an increase in the occurrence of extreme events.

At the seasonal level, in the near horizon and under the SSP245 scenario, models in autumn project a significant increase over all of Uruguay with higher precipitation values in the coast; in turn, in winter a negative trend to the southwest is projected, which is maintained in spring, and an increase in rainfall in the northeast of the country for the same period. Under the SSP585 scenario, autumn is the season with the greatest increase in rainfall, with a maximum in the eastern region, while in summer the signal is not very robust and during spring a southwest-northeast dipole is observed.

The risk analysis for the Uruguayan coastal zone has taken into account as elements of exposure to the population, built assets, critical infrastructure and ecosystems located below the elevation +10 meters for the different scenarios and return periods studied (TR: 5, 10, 25, 50, 100, 500 years).

Preliminary results indicate that the present flooded coastal area ranges from 7,000 to 1,200 ha, depending on the five-year return period. This area increases as the time horizon increases, becoming critical in the RCP8.5 scenario. The increases expected at the end of the century represent an average of 43%, with a flood range of 10,500 - 12,000 ha for a five hundred year return period.

In any of the scenarios studied, it can be seen that the greatest damage is suffered by residential assets, representing approximately 50% of the damage to all built assets. In reference to coastal erosion caused by extreme events, currently between 15,000 - 22,000 km are lost[2] , this area will increase by the end of the century in the RCP8.5 scenario by 2 - 3% for the entire coastal zone.

The integration of the different return periods applied made it possible to obtain an expected annual damage as a risk indicator for the different scenarios (RCP4.5, RCP8.5), resulting in a present value for damages of USD 9 million caused by climate impacts in the coastal zone. This cost will increase by USD 11 million by 2050, reaching USD 15 million by the end of the century with RCP4.5 and more than USD 20 million with RCP8.5.

The combination of high-resolution baseline information with process impact models and a probabilistic approach contributed to significantly reduce uncertainties in comparison with other studies carried out on a national scale that are usually applied in indicators to characterize impacts and other risk components. Thus, the methodology applied made it possible to identify the areas with the greatest potential risk of flooding and coastal erosion, the most vulnerable natural and socioeconomic subsystems, and the areas with the greatest need for adaptation.

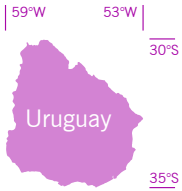
To date, there is a consensual set of adaptation measures generally applicable to the entire coastal zone, and at the same time, aligned with the results obtained in the vulnerability and risk assessment described above. These measures are classified according to whether they refer to interventions in the coastal territory or enable the implementation of actions at all levels of action. According to their typology, they are distinguished into physical, social and institutional structural.

Annex 11

Energy Balance 2022

Ministerio de Industria, Energía y Minería
BEN Balance Energético Nacional Uruguay

República Oriental del Uruguay
Ministry of Industry, Energy and Mining
National Energy Directorate



Population
3,554,915 inhab.
SOURCE: INE, National Statistics Institute.

GDP per cápita
20,022 U$S/inhab.
SOURCE: BCU, Central Bank of Uruguay. GDP base 2016.

Total final consumption/GDP
69 toe/millons US$

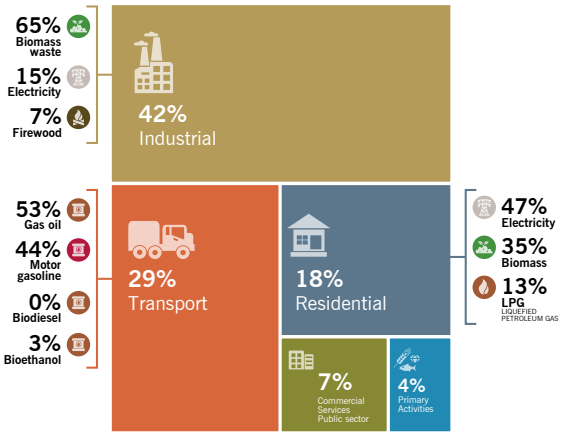
Final energy consumption per capita
1,391 tep/1000 inhab.

Electricity consumption per capita
3,305 kWh/inhab.

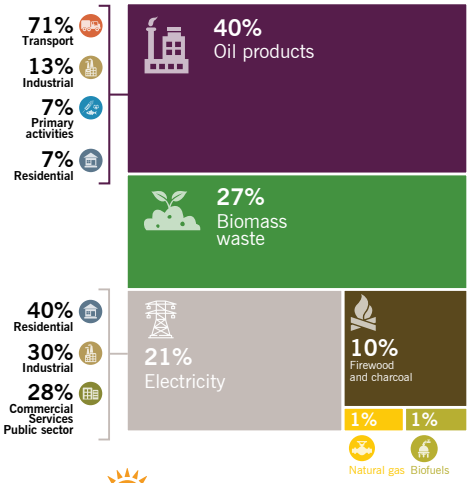
Final energy consumption
4,836ktoe

+ INFO

Final energy consumption by Sector



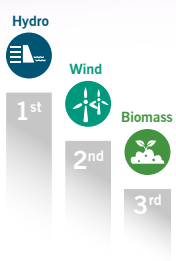
Final energy consumption by Source

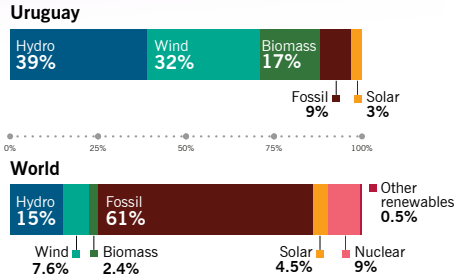


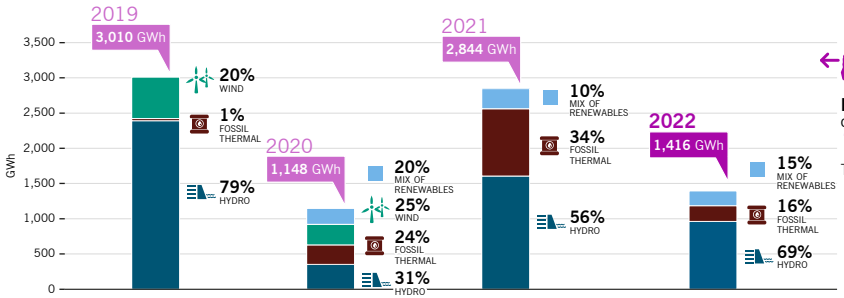
Electricity generation
(% share by source, 2022)

Uruguay TOTAL **2022**
14,759GWh

+ INFO







Exports
of Electric Energy
1,416GWh
TOTAL **2022**

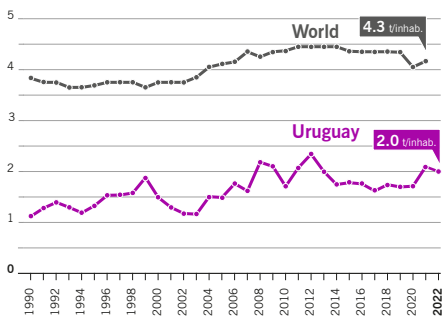
CO_2

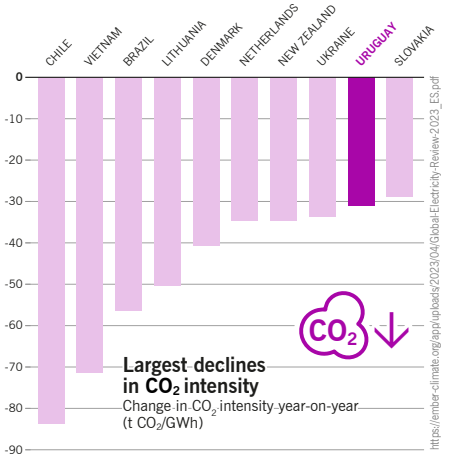
CO_2 emissions by GDP
101 t/millons US$

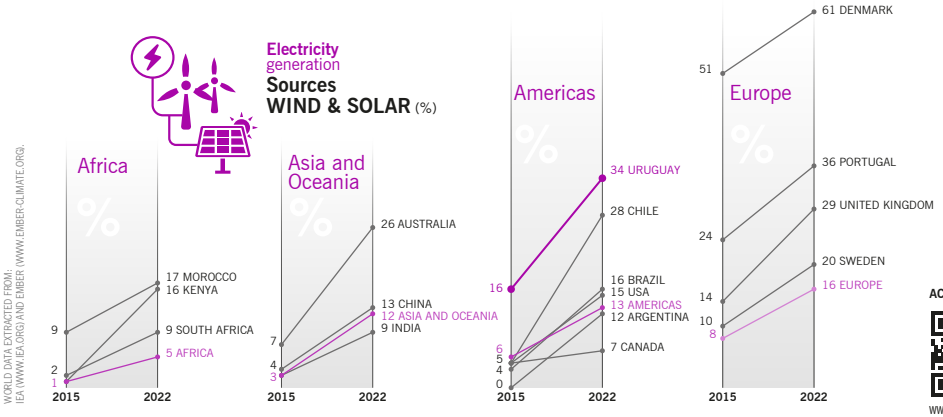
Grid emission factor
60 t CO_2/GWh

+ INFO

CO_2 emissions per capita
(t/inhab.)







Solar
2022 vs. 2021
INSTALLED CAPACITY

THERMAL
123,973 m²
↑**7%**

PHOTOVOLTAIC
280 MW
↑**5%**

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BEN Balance Energético Nacional Uruguay

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FRAGMENTATION OF INTERNATIONAL LAW: DIFFICULTIES ARISING FROM THE DIVERSIFICATION AND EXPANSION OF INTERNATIONAL LAW

[Agenda item 11]

DOCUMENT A/CN.4/L.682 and Add.1*

Report of the Study Group of the International Law Commission, finalized by Mr. Martti Koskenniemi**

[*Original: English*]
[*13 April 2006*]

CONTENTS

* Incorporating document A/CN.4/L.682/Corr.1.

** The Chairman gratefully acknowledges the help of a number of colleagues who have commented on the topic and provided advice and assistance on particular questions. Special mention should, among them, be made of Professor Campbell McLachlan, Dr. Anders Fischer-Lescano, Professor Gunther Teubner, Professor Emmanuelle Jouannet, Professor Pierre-Marie Dupuy and Ms. Isabelle Van Damme. Several New York University interns provided assistance during the Study Group meetings and in collecting background materials on particular items. They include Gita Kothari, Cade Mosley, Peter Prows and Olivia Maloney. Anna Huilaja, Ilona Nieminen and Varro Vooglaid at the Erik Castrén Institute of International Law and Human Rights in Helsinki provided much appreciated help in research. Last but not least, the assistance throughout the years of Ms. Anja Lindroos from the University of Helsinki needs to be recognized. Without her careful notes of the Study Group meetings and her background research, this report would never have materialized. Nevertheless, the contents of this report—including any opinions therein—remain the sole responsibility of its author.

ABBREVIATIONS

EURATOM	European Atomic Energy Community
GATT	General Agreement on Tariffs and Trade
ICSID	International Centre for Settlement of Investment Disputes
MERCOSUR	Southern Common Market
MOX Plant	Mixed Oxide Reprocessing Plant
OSPAR Convention	Convention for the Protection of the Marine Environment of the North-East Atlantic
RTA	Regional Trade Agreement
UNIDROIT	International Institute for the Unification of Private Law
WTO	World Trade Organization

*

* *

AJIL	*American Journal of International Law*
ECHR	European Court of Human Rights, *Reports of Judgments and Decisions*. All judgments and decisions of the Court, including those not published in the official series, can be consulted in the database of the Court (HUDOC), available from the Court's website (www.echr.coe.int).
EJIL	*European Journal of International Law*
I.C.J. Pleadings	International Court of Justice, *Pleadings, Oral Arguments, Documents*; available from the Court's website (www.icj-cij.org).
I.C.J. Reports	International Court of Justice, *Reports of Judgments, Advisory Opinions and Orders*. All judgments, advisory opinions and orders of the Court are available from the Court's website (www.icj-cij.org).
ILM	*International Legal Materials*
ILR	*International Law Reports*
IRAN–U.S. C.T.R.	*Iran–United States Claims Tribunal Reports*
ITLOS Reports	International Tribunal for the Law of the Sea, *Reports of Judgments, Advisory Opinions and Orders*. The Tribunal's case law is available on its website (www.itlos.org).
LGDJ	*Librairie générale de droit et de jurisprudence*
P.C.I.J., Series A	Permanent Court of International Justice, *Collection of Judgments* (Nos. 1–24, up to 1930 inclusive).
P.C.I.J., Series B	Permanent Court of International Justice, *Collection of Advisory Opinions* (Nos. 1–18, up to 1930 inclusive).
P.C.I.J., Series A/B	Permanent Court of International Justice, *Judgments, Orders and Advisory Opinions* (Nos. 40–80, from 1931).
RGDIP	*Revue générale de droit international public*
UNRIAA	United Nations, *Reports of International Arbitral Awards*

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* *

In the present volume, "International Tribunal for the Former Yugoslavia" refers to the International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991.

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NOTE CONCERNING QUOTATIONS

In quotations, words or passages in italics followed by an asterisk were not italicized in the original text.

Unless otherwise indicated, quotations from works in languages other than English have been translated by the Secretariat.

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* *

The Internet address of the International Law Commission is **http://legal.un.org/ilc/**.

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	Source
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Peace Treaty between the Allied and Associated Powers and Austria (Treaty of Saint-Germain) (Saint-Germain-en-Laye, 10 September 1919)	*Ibid*., p. 691.
Reconstruction of Austria. Protocol No. 1 (Declaration) (Geneva, 4 October 1922)	League of Nations, *Treaty Series*, vol. XII, No. 334, p. 385.
Treaty of Peace between the British Empire, France, Italy, Japan, Greece, Romania, the Serb-Croat-Slovene State, and Turkey (Treaty of Lausanne) (Lausanne, 24 July 1923)	*Ibid*., vol. XXVIII, No. 701, p. 11.
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Convention on the Prevention and Punishment of the Crime of Genocide (Paris, 9 December 1948)	*Ibid*., vol. 78, No. 1021, p. 277.
North Atlantic Treaty (Washington, D.C., 4 April 1949)	*Ibid*., vol. 34, No. 541, p. 243.
Statute of the Council of Europe (London, 5 May 1949)	*Ibid*., vol. 87, No. 1168, p. 103.
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Geneva Convention relative to the Protection of Civilian Persons in Time of War (Convention IV)	*Ibid*., vol. 75, No. 973, p. 287.
Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights) (Rome, 4 November 1950)	*Ibid*., vol. 213, No. 2889, p. 221.
European Convention relating to the Formalities Required for Patent Applications (Paris, 11 December 1953)	*Ibid*., vol. 218, No. 2952, p. 27.
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	Source
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Treaty on European Union (Treaty of Maastricht) (Maastricht, 7 February 1992)	*Ibid*., vol. 1757, No. 30615, p. 3.
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Convention on the High Seas	United Nations, *Treaty Series*, vol. 450, No. 6465, p. 11.
Convention on the Continental Shelf	*Ibid*., vol. 499, No. 7302, p. 311.
Convention on the Territorial Sea and the Contiguous Zone	*Ibid*., vol. 516, No. 7477, p. 205.
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Convention concerning Judicial Competence and the Execution of Decisions in Civil and Commercial Matters (Brussels, 27 September 1968)	*Ibid*., vol. 1262, No. 20747, p. 153.
Vienna Convention on the Law of Treaties (1969 Vienna Convention) (Vienna, 23 May 1969)	*Ibid*., vol. 1155, No. 18232, p. 331.
American Convention on Human Rights: "Pact of San José, Costa Rica" (San José, 22 November 1969)	*Ibid*., vol. 1144, No. 17955, p. 123.
Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation (Montreal, 23 September 1971)	*Ibid*., vol. 974, No. 14118, p. 177.
Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (London, Moscow and Washington, D.C., 10 April 1972)	*Ibid*., vol. 1015, No. 14860, p. 163.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, D.C., 3 March 1973)	*Ibid*., vol. 993, No. 14537, p. 243.
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	Source
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Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal, 16 September 1987)	*Ibid*., vol. 1522, No. 26369, p. 3. The updated and amended text of the Protocol appears in United Nations Environment Programme, *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer*, 8th ed., 2009.
South Pacific Nuclear Free Zone Treaty (Rarotonga Treaty) (Rarotonga, 6 August 1985)	United Nations, *Treaty Series*, vol. 1445, No. 24592, p. 177.
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United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (Vienna, 20 December 1988)	*Ibid*., vol. 1582, No. 27627, p. 95.
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Convention on Insider Trading (Strasbourg, 20 April 1989)	*Ibid*., vol. 1704, No. 29471, p. 133.
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European Convention on Transfrontier Television (Strasbourg, 5 May 1989)	*Ibid*., vol. 1966, No. 33611, p. 265.
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Convention on the Transboundary Effects of Industrial Accidents (Helsinki, 17 March 1992)	*Ibid*., vol. 2105, No. 36605, p. 457.
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	Source
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Introduction

1. At its fifty-second session, in 2000, the International Law Commission decided to include the topic "Risks ensuing from fragmentation of international law" in its long-term programme of work.[1] The following year, the General Assembly requested the Commission to give further consideration to the topics in that long-term programme. At its fifty-fourth session, in 2002, the Commission decided to include the topic, renamed "Fragmentation of international law: difficulties arising from the diversification and expansion of international law", in its programme of work and to establish a Study Group.[2] The Study Group adopted a number of recommendations on topics to be dealt with and requested its then Chairperson, Mr. Bruno Simma, to prepare a study on the function and scope of the *lex specialis* rule and the question of "self-contained regimes".[3] At its fifty-fifth session, in 2003, the Commission appointed Mr. Martti Koskenniemi as Chairperson of the Study Group. The Study Group also set a tentative schedule for its work, distributed the studies decided upon the previous year among its members and agreed on a methodology to be adopted for that work.[4]

2. In 2003 the Chairperson of the Study Group submitted an outline for a study on the function and scope of the *lex specialis* rule and the question of "self-contained regimes" to the Group. After a preliminary debate on that outline, concentrating on substantive and methodological issues, the definitive study on that item was distributed to the Commission the following year.[5] In addition to that study, in 2004 the Study Group also had before it the outlines produced by members of the Study Group on the four remaining items. It held an in-depth discussion of the Chairperson's report and gave some indications to the other members of the Commission in regard to the preparation of the various reports. In addition, it commenced discussion of the tentative "conclusions" it might draw on the basis of its debates.[6]

3. In 2005 the Commission was briefed by the Chairperson of the Study Group on the status of the Study Group's work and held an exchange of views on the topic. The Study Group considered a memorandum on regionalism, prepared by its Chairperson, and received definitive reports on the interpretation of treaties in the light of "any relevant rules of international law applicable in the relations between the parties" (art. 31, para. 3 (*c*), of the 1969 Vienna Convention) and the modification of multilateral treaties between certain of the parties only (art. 41 of the 1969 Vienna Convention), as well as the final report on hierarchy in international law: *jus cogens*, obligations *erga omnes* and Article 103 of the Charter of the United Nations as conflict rules. In addition, the Study Group also received an informal paper from one of its members on the "disconnection clause". The Study Group envisaged that it would be in a position to submit a consolidated study, as well as a set of conclusions, guidelines or principles, to the Commission at its fifty-eighth session, in 2006.[7]

4. This is the consolidated report of the Study Group. It has been prepared by its Chairperson on the basis of the outlines and reports produced in the course of four years' work by himself (on the function and scope of the *lex specialis* rule and the question of "self-contained" regimes) and by Mr. Riad Daoudi (mdification of multilateral treaties between certain of the parties only (art. 41 of the 1969 Vienna Convention)); Mr. Zdzislaw Galicki (hierarchy in international law: *jus cogens*, obligations *erga omnes* and Article 103 of the Charter of the United Nations as conflict rules); Mr. William Mansfield (interpretation of treaties in the light of "any relevant rules of international law applicable in the relations between the parties" (art. 31, para. 3 (*c*), of the 1969 Vienna Convention)); and Mr. Teodor Melescanu (application of successive treaties relating to the same subject matter). Several other Commission members took part in the deliberations of the Study Group during its sessions and their special knowledge greatly facilitated the discussion of particular topics. In addition, this report is complemented by an annex containing the proposed set of draft conclusions to be adopted by the Study Group and forwarded to the Commission in 2006 for appropriate action.

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[1] *Yearbook … 2000*, vol. II (Part Two), para. 729. See also the study by Mr. Gerhard Hafner, "Risks ensuing from fragmentation of international law", *ibid.*, annex, p. 143.

[2] *Yearbook … 2002*, vol. II (Part Two), paras. 492–494, 511.

[3] *Ibid.*, paras. 512–513. The five topics were: (*a*) The function and scope of the *lex specialis* rule and the question of "self-contained regimes"; (*b*) The interpretation of treaties in the light of "any relevant rules of international law applicable in the relations between the parties" (art. 31, para. 3 (*c*), of the 1969 Vienna Convention), in the context of general developments in international law and concerns of the international community; (*c*) The application of successive treaties relating to the same subject matter (art. 30 of the 1969 Vienna Convention); (*d*) The modification of multilateral treaties between certain of the parties only (art. 41 of the 1969 Vienna Convention); (*e*) Hierarchy in international law: *jus cogens*, obligations *erga omnes* and Article 103 of the Charter of the United Nations as conflict rules.

[4] *Yearbook … 2003*, vol. II (Part Two), paras. 413, 424–435.

[5] *Yearbook … 2004*, vol. II (Part Two), paras. 298–358.

[6] *Ibid.*

[7] *Yearbook … 2005*, vol. II (Part Two), paras. 445–493.

Chapter I

Fragmentation as a phenomenon

A. Background

5. The background to fragmentation was sketched half a century ago by Wilfred Jenks, who drew particular attention to two phenomena. On the one hand, the international world lacked a general legislative body; thus:

> law-making treaties are tending to develop in a number of historical, functional and regional groups which are separate from each other and whose mutual relationships are in some respects analogous to those of separate systems of municipal law.[8]

6. Very presciently, Jenks envisaged the need for a close analogy with conflict of laws to deal with this type of fragmentation. This would be a law regulating not conflicts between territorial legal systems, but conflicts between treaty regimes. A second reason for the phenomenon he found within the law itself:

> One of the most serious sources of conflict between law-making treaties is the imperfect development of the law governing the revision of multipartite instruments and defining the legal effect of revision.[9]

7. There is little to be added to that analysis today. Of course, the volume of multilateral—"legislative"—treaty activity has grown manifold in the past fifty years.[10] It has also been accompanied by various more or less formal regulatory regimes, not all of which share the public law orientation of multilateral diplomacy.[11] One of the features of late international modernity has been what sociologists have called "functional differentiation", the increasing specialization of parts of society and the related autonomization of those parts. This takes place nationally as well as internationally. It is a well-known paradox of globalization that, while it has led to increasing uniformization in the life of societies around the world, it has also led to the increasing fragmentation thereof—that is, to the emergence of specialized and relatively autonomous spheres of social action and structure.

8. The fragmentation of the international social world has attained legal significance, especially as it has been accompanied by the emergence of specialized and (relatively) autonomous rules or rule complexes, legal institutions and spheres of legal practice.[12] What once appeared to be governed by "general international law" has become the field of operation for such specialist systems as "trade law", "human rights law", "environmental law", the "law of the sea", "European law" and even such exotic and highly specialized knowledge as "investment law" or "international refugee law", etc., each possessing its own principles and institutions. The problem, as lawyers have seen it, is that such specialized law-making and institution-building tends to take place with relative ignorance of legislative and institutional activities in adjoining fields and of the general principles and practices of international law. The result is conflicts between rules or rule systems, deviating institutional practices and, possibly, the loss of an overall perspective on the law.[13]

9. While the reality and importance of fragmentation, in both its legislative and its institutional form, cannot be doubted, international lawyers have been divided in their assessment of the phenomenon. Some commentators have been highly critical of what they have seen as the erosion of general international law, the emergence of conflicting jurisprudence, forum-shopping, and loss of legal security. Others have seen here merely a technical problem that has emerged naturally with the increase of international legal activity and may be controlled by the use of technical streamlining and coordination.[14]

10. Without going into details of the sociological or political background that has led to the emergence of special

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[8] C. W. Jenks, "The conflict of law-making treaties", *British Year Book of International Law 1953*, vol. 30, p. 401, at p. 403.

[9] *Ibid.*

[10] Over 50,000 treaties are registered in the United Nations system. See C. J. Borgen, "Resolving treaty conflicts", *George Washington International Law Review*, vol. 37, No. 3 (2005), p. 573. In the twentieth century, about 6,000 multilateral treaties were concluded, of which around 30 per cent were general treaties, open for all States to participate in (C. Ku, *Global Governance and the Changing Face of International Law,* Academic Council on the United Nations System, 2001, p. 5).

[11] Of the various collections that discuss the diversification of the sources of international regulation, particularly useful are E. Loquin and C. Kessedjian (eds.), *La mondialisation du droit,* Paris, Litec, 2000, and P. S. Berman (ed.), *The Globalization of International Law*, Aldershot, Ashgate, 2005. The activity of traditional organizations is examined in J. E. Alvarez, *International Organizations as Law-makers*, Oxford, Oxford University Press, 2005. Different perspectives on non-treaty law-making today are also presented in R. Wolfrum and V. Röben (eds.), *Developments of International Law in Treaty Making*, Berlin, Springer, 2005, pp. 417–586, and R. Lipschutz and C. Fogel, "'Regulation for the rest of us?' Global civil society and the privatization of transnational regulation", in R. B. Hall and T. J. Biersteker (eds.), *The Emergence of Private Authority in Global Governance*, Cambridge, Cambridge University Press, 2002, p. 115.

[12] See, in particular, A. Fisher-Lescano and G. Teubner, "Regime-collisions: the vain search for legal unity in the fragmentation of global law", *Michigan Journal of International Law*, vol. 25, No. 4 (summer 2004), pp. 999–1046. The matter has, however, already been discussed in great detail in L. A. N. M. Barnhoorn and K. C. Wellens (eds.), *Diversity in Secondary Rules and the Unity of International Law,* The Hague, Martinus Nijhoff, 1995.

[13] It should not be forgotten that the tradition of legal pluralism seeks precisely to deal with such problems. So far, however, pluralism has concentrated on studying the coexistence of indigenous and Western law in old colonial territories and the emergence of types of private law in domestic societies. For a famous statement, see S. E. Merry, "Legal pluralism", *Law and Society Review*, vol. 22, No. 5 (1988), p. 869, and, more recently (and critically), S. Roberts, "After government? On representing law without the State", *Modern Law Review*, vol. 68, No. 1 (January 2005), p. 1.

[14] "Fragmentation" is a topic very frequently covered by academic writings and conferences today. In addition to the sources in footnote 11 above, see "Symposium issue—The proliferation of international tribunals: piecing together the puzzle", *New York University Journal of International Law and Politics*, vol. 31, No. 4 (summer 1999) p. 679; A. Zimmermann and R. Hoffmann (eds.), with assistant editor H. Goeters, *Unity and Diversity in International Law: Proceedings of an International Symposium of the Kiel Walther Schücking Institute of International Law, November 4–7, 2004,* Berlin, Duncker & Humblot, 2006; and R. Huesa Vinaixa and K. Wellens (eds.), *L'influence des sources sur l'unité et la fragmentation du droit international. Travaux du séminaire tenu à Palma, les 20-21 mai 2005*, Brussels, Bruylant, 2006. A strong plea for unity is contained in P.-M. Dupuy, "L'unité de l'ordre juridique international. Cours général de droit international public (2000)", *Recueil des cours de l'Académie de droit international de La Haye, 2002,* vol. 297. For more references, see M. Koskenniemi and P. Leino, "Fragmentation of international law? Postmodern anxieties", *Leiden Journal of International Law*, vol. 15, No. 3 (September 2002), p. 553.

or specialist rule systems and institutions, the nature of the legal problem may perhaps best be illustrated by reference to a practical example. The question of the possible environmental effects of the operation of the MOX Plant nuclear facility at Sellafield, United Kingdom, has recently been raised through three different institutional mechanisms: an arbitral tribunal set up under annex VII to the United Nations Convention on the Law of the Sea; the compulsory dispute settlement procedure under the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention); and proceedings under the Treaties establishing the European Community and the European Atomic Energy Community (EURATOM) before the European Court of Justice. Three rule complexes all appear to address the same facts: the (universal) rules of the United Nations Convention on the Law of the Sea, the (regional) rules of the OSPAR Convention and the (regional) rules of the European Community and EURATOM. Which should be determinative? Is the problem principally about the law of the sea, about (possible) pollution of the North Sea, or about relationships within the European Community? The fact of posing such questions already points to the difficulty of providing an answer. How do such rule complexes link to each other, if at all? What principles should be used in order to decide a potential conflict between them?

11. Yet the problem is even more difficult. Discussing the objection to its jurisdiction raised by the United Kingdom on account of the same matter being also pending before an OSPAR arbitral tribunal and the European Court of Justice, the arbitral tribunal set up under annex VII to the United Nations Convention on the Law of the Sea observed:

> [E]ven if the OSPAR Convention, the [Treaty establishing the European Community] and the Euratom Treaty contain rights or obligations similar to or identical with the rights or obligations set out in the [United Nations Convention on the Law of the Sea], the rights and obligations under those agreements have a separate existence from those under the Convention.[15]

12. The tribunal held that even the application of the same rules by different institutions might be different owing to "differences in the respective contexts, objects and purposes, subsequent practice of parties and *travaux préparatoires*".[16] The tribunal recognized that the meaning of legal rules and principles is dependent on the context in which they are applied. If the context, including the normative environment, is different, then even identical provisions may appear differently. But what does this do to the objectives of legal certainty and the equality of legal subjects?

13. The previous paragraph raises both institutional and substantive problems. The former have to do with the competence of various institutions applying international legal rules and their hierarchical relations *inter se*. The Commission decided to leave this question aside. The issue of institutional competencies is best dealt with by the institutions themselves. The Commission instead wished to focus on the substantive question—the splitting up of the law into highly specialized "boxes" that claim relative autonomy both from one other and from the general law. What are the substantive effects of such specialization? How should the relationship between such "boxes" be conceived? In terms of the above example, what is the relationship between the United Nations Convention on the Law of the Sea, an environmental treaty and a regional integration instrument?

14. The Commission has understood the subject to have both positive and negative sides, as attested by its reformulation of the title of the topic: "Fragmentation of international law: difficulties arising from the diversification and expansion of international law". On the one hand, fragmentation does create the danger of conflicting and incompatible rules, principles, rule systems and institutional practices. On the other, it reflects the rapid expansion of international legal activity into various new fields and the diversification of its objects and techniques. The title seems to suggest that, although there are "problems", they are neither altogether new nor of such nature that they could not be dealt with through techniques international lawyers have used to deal with normative conflicts that may have arisen in the past.

15. The rationale for the Commission's treatment of fragmentation is that the emergence of new and special types of law, "self-contained regimes" and geographically or functionally limited treaty systems creates problems of coherence in international law. New types of specialized law do not emerge accidentally but seek to respond to new technical and functional requirements. The emergence of "environmental law" is a response to growing concern over the state of the international environment. "Trade law" develops as an instrument to regulate international economic relations. "Human rights law" aims to protect the interests of individuals and "international criminal law" gives legal expression to the "fight against impunity". Each rule complex or "regime" comes with its own principles, its own form of expertise and its own "ethos", not necessarily identical to the ethos of neighbouring specializations. "Trade law" and "environmental law", for example, have highly specific objectives and rely on principles that may often point in different directions. In order for the new law to be efficient, it often includes new types of treaty clauses or practices that may not be compatible with old general law or the law of some other specialized branch. Very often new rules or regimes develop precisely in order to deviate from what was earlier provided by the general law. When such deviations become general and frequent, the unity of the law suffers.

16. Such deviations should not be understood as "mistakes" of legal technique. They reflect the differing pursuits and preferences that actors in a pluralistic (global) society have. In conditions of social complexity, it is pointless to insist on formal unity. A law that failed to articulate the differences experienced between factual situations or between the interests or values that appeared relevant in particular problem areas would seem altogether unacceptable, simultaneously utopian and authoritarian;[17] but if fragmentation is in this sense a "nat-

[15] *MOX Plant* (*Ireland v. the United Kingdom*), International Tribunal for the Law of the Sea, provisional measures, order of 3 December 2001, *ITLOS Reports 2001*, p. 95, at p. 106, para. 50; ILR, vol. 126, p. 273.

[16] *ITLOS Reports 2001*, p. 106, para. 51; ILR, vol. 126, pp. 273–274.

[17] The emergence of an international legal pluralism has been given an ambitious overview in B. de Sousa Santos, *Toward a New Common Sense: Law, Science and Politics in the Paradigmatic Transition*, New York, Routledge, 1995, especially pp. 114 *et seq.*

ural" development (indeed, international law was always relatively "fragmented" owing to the diversity of national legal systems that participated in it) then it is not obvious why the Commission should deal with it.

17. The starting point for this report is that it is desirable to provide a conceptual framework within which what is perhaps inevitable can be grasped, assessed and managed from the point of view of the legal professional. That framework is provided by the Vienna Convention on the Law of Treaties (1969 Vienna Convention). One aspect that does seem to unite most of the new regimes is that they claim binding force from, and are understood by their practitioners to be covered by, the law of treaties. As the organ that once prepared the 1969 Vienna Convention, the Commission is in a good position to analyse international law's alleged fragmentation from that perspective. It is useful to note what is involved here: although, sociologically speaking, present fragmentation contains many new features, and its intensity differs from analogous phenomena in the past, it is nevertheless an incidence of the diversity of the international social world—a quality that has always marked the international system, contrasting it with the (relatively) more homogenous domestic context. The fragmentation of the international legal system into technical "regimes", when examined from the point of view of the law of treaties, is not too different from its traditional fragmentation into more or less autonomous territorial regimes called "national legal systems".

18. It is therefore useful to have regard to the wealth of techniques in traditional law for dealing with tensions or conflicts between legal rules and principles. What is common to these techniques is that they seek to establish meaningful relationships between such rules and principles so as to determine how they should be used in any particular dispute or conflict. This report discusses four types of relationships that lawyers have traditionally understood to be involved in normative conflicts:

(*a*) Relationships between special and general law (chapter II);

(*b*) Relationships between prior and subsequent law (chapter III);

(*c*) Relationships between laws at different hierarchical levels (chapter IV); and

(*d*) How law relates to its "normative environment" more generally (chapter V).

19. Such relationships may be conceived in varying ways. At one end of the spectrum is the case where one law (norm, rule, principle, rule complex) simply invalidates another law. This takes place only in hierarchical relations involving *jus cogens*. Much more often, priority is "relative". The "other law" is set aside only temporarily and may often be allowed to influence the interpretation and application of the prioritized law "from the background". Then there is the case where two norms are held to act concurrently, mutually supporting each other. At the other end of the spectrum is the case where, finally, there appears to be no conflict or divergence at all. The laws are in harmony.

20. This report will discuss such relationships especially by reference to the practice of international courts and tribunals. The assumption is that international law's traditional "fragmentation" has already equipped practitioners with techniques to deal with rules and rule systems that point in different directions. This does not mean cancelling out the importance of the recent push towards the functional specialization of regulatory regimes, but it does suggest that these factual developments are of relatively minor significance to the operation of legal reasoning. In an important sense, "fragmentation" and "coherence" are not aspects of the world but lie in the eye of the beholder. What is new and unfamiliar will (by definition) challenge accustomed ways of thinking and organizing the world. Novelty presents itself as "fragmentation" of the old world. In such a case, it is the task of reasoning to make the unfamiliar familiar by integrating it into received patterns of thought or by amending those patterns so that the new phenomenon can be accommodated. Of course, there will always remain some "cognitive dissonance" between the familiar conceptual system and the new information we receive from the world. The problems of coherence raised by the *MOX Plant* case, for example, have not *already* been resolved in some juristic heaven so that the only task would be to try to find that pre-existing solution. But the fact that the potential overlap or conflict between the rules of the United Nations Convention on the Law of the Sea, the OSPAR Convention and European Community law cannot be resolved immediately does not mean that it could not be framed within familiar patterns of legal reasoning. This report is about legal reasoning. Although it does not purport to give ready-made solutions to a problem such as that of the MOX Plant, it does provide a toolbox, with the help of which lawyers dealing with that problem (or any other comparable issue) may be able to proceed to a reasoned decision.

B. What is a "conflict"?

21. This report examines techniques to deal with conflicts (or *prima facie* conflicts) in the substance of international law. This raises the question of what is a "conflict"? This question may be approached from two perspectives: the subject matter of the relevant rules and the legal subjects bound by them. Article 30 of the 1969 Vienna Convention, for example, appears to adopt the former perspective. It suggests techniques for dealing with successive treaties relating to the "same subject-matter". It is sometimes suggested that this removes the applicability of article 30 when a conflict emerges between, for example, a trade treaty and an environmental treaty, because they deal with *different* subjects.[18] But this cannot be so, inasmuch as these characterizations ("trade law", "environmental law") have no normative value *per se*. They are only informal labels that describe the instruments from the perspective of different interests or different policy objectives. Most international instruments may be described from various perspectives: a treaty dealing with trade may have significant human rights and environmental implications and *vice versa*. A treaty on, say, maritime transport of chemicals relates to at least the law of the sea, environmental law, trade law and the law of maritime transport. These characterizations have less to

[18] Borgen (see footnote 10 above), pp. 603–604.

do with the "nature" of the instrument than the interest from which it is described.

22. If conflict were to exist only between rules that deal with the "same" subject matter, then the way a treaty is applied would become crucially dependent on how it would be classified under some (presumably) pre-existing classification scheme of different subjects. But there are no such classification schemes. Everything would in fact be dependent on argumentative success in pigeon-holing legal instruments as having to do with "trade" instead of "the environment", "refugee law" instead of "human rights law", "investment law" instead of "the law of development". Think again about the example of maritime carriage of chemical substances. If there are no definite rules on such classification, and any classification relates to the interest from which the instrument is described, then it might be possible to avoid the appearance of conflict by what seems like a wholly arbitrary choice as to what interests are relevant and what are not: from the perspective of marine insurers, say, the case would be predominantly about carriage, while, from the perspective of an environmental organization, the predominant aspect of it would be environmental. The criterion of "subject matter" leads to *reductio ad absurdum*; therefore, it cannot be decisive in the determination of whether or not there is a conflict.[19] As pointed out by Vierdag in his discussion of this criterion in regard to subsequent agreements under article 30 of the 1969 Vienna Convention:

> [t]he requirement that the instruments must relate to the same subject-matter seems to raise extremely difficult problems in theory, but may turn out not to be so very difficult in practice. If an attempted simultaneous application of two rules to one set of facts or actions leads to incompatible results it can safely be assumed that the test of sameness is satisfied.[20]

23. This seems right. The criterion of "same subject matter" already seems to be fulfilled if two different rules or sets of rules are invoked with regard to the same matter, or if, in other words, as a result of interpretation, the relevant treaties seem to point in different directions in terms of their application by a party.

24. This is not the end of the matter, however. What does "pointing in different directions" mean? A strict notion would presume that a conflict exists if it is possible for a party to two treaties to comply with one rule only by thereby failing to comply with another rule. This is the basic situation of incompatibility. An obligation may be fulfilled only by thereby failing to fulfil another obligation. However, there are other, looser understandings of conflict as well.[21] One treaty may sometimes frustrate the goals of another treaty without there being any strict incompatibility between their provisions. Two treaties or sets of rules may possess different background justifications or emerge from different legislative policies or aim at divergent ends. The law of State immunity and the law of human rights, for example, illustrate two sets of rules that have very different objectives. Trade law and environmental law, too, emerge from different types of policy, and that fact may have an effect on how the relevant rules are interpreted or applied. While such "policy conflicts" do not lead to logical incompatibilities between obligations upon a single party, they may nevertheless also be relevant for fragmentation.[22]

25. This report adopts a wide notion of conflict as a situation where two rules or principles suggest different ways of dealing with a problem. Focusing on a mere logical incompatibility mischaracterizes legal reasoning as logical subsumption. In fact, any decision will involve interpretation and choice between alternative rule formulations and meanings that cannot be pressed into the model of logical reasoning.

26. Conflicts between rules are a phenomenon in every legal order. Every legal order is also familiar with ways to deal with them. Maxims such as *lex specialis* or *lex posterior* are known to most legal systems and, as will be explained in much more detail below, to international law. Domestic legal orders also have robust hierarchical relations between rules and rule systems (in addition to hierarchical institutions to decide rule conflicts). In international law, however, as will also be discussed in chapter IV below, there are far fewer and much less robust hierarchies, and there are many types of interpretative principles that purport to help out in conflict resolution. Nevertheless, it is useful to agree with Jenks:

> Assuming, as it is submitted we must, that the development of a coherent body of principles on the subject is not merely desirable but necessary, we shall be constrained to recognize that, useful and indeed essential as such principles may be to guide us to reasonable conclusions in particular cases, they have no absolute validity.[23]

C. The approach of this study: seeking relationships

27. Conflict ascertainment and conflict resolution are part of *legal reasoning*, that is, of the pragmatic process by which lawyers go about interpreting and applying formal law. In this process, legal rules rarely, if ever, appear alone, without some relationship to other rules. Typically, even single (primary) rules that lay down individual rights and obligations presuppose the existence of (secondary) rules that provide for the powers of legislative agencies to enact, modify and terminate such rules and for the competence of law-applying bodies to interpret and apply them.

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[19] This is not to say that the fact that two treaties may or may not belong to the same "regime" is irrelevant for the way their relationship is conceived. See further, in particular, chapter II, section C.1, below.

[20] E. W. Vierdag, "The time of the 'conclusion' of a multilateral treaty: article 30 of the Vienna Convention on the Law of Treaties and related provisions", *British Year Book of International Law 1988*, vol. 59, p. 75, at p. 100.

[21] The most in-depth discussion is in J. Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law*, Cambridge, Cambridge University Press, 2003, pp. 164–200 (noting the way the bodies of the World Trade Organization (WTO) have used a narrow understanding of "conflict" as incompatibility). See also the distinction made by Jenks between "conflicts" and "divergences" (Jenks (see footnote 8 above), pp. 425–427) and, for a rather strict definition of "conflict", J. B. Mus, "Conflicts between treaties in international law", *Netherlands International Law Review,* vol. 45 (1998), p. 208, at pp. 214–217; S. A. Sadat-Akhavi, *Methods of Resolving Conflicts between Treaties,* Leiden, Martinus Nijhoff, 2003, pp. 5–7.

[22] For a discussion, see R. Wolfrum and N. Matz, *Conflicts in International Environmental Law,* Berlin, Springer, 2003, pp. 6–13, and N. Matz, *Wege zur Koordinierung völkerrechtlicher Verträge: Völkervertragsrechtliche und institutionelle Ansätze*, Berlin, Springer, 2005, pp. 8–18 (a categorization of conflict types from logical incompatibility to political conflicts and overlaps of regulatory scope).

[23] Jenks (see footnote 8 above), p. 407.

28. But even substantive primary rules usually appear in clusters, together with exceptions, provisions for technical implementation and larger interpretative principles. The commonplace distinction between "rules" and "principles" captures one set of typical relationships: those between norms of a lower and higher degree of abstraction. A "rule" may thus sometimes be seen as a specific application of a "principle" and understood as *lex specialis* or *lex posterior* in regard to it, and become applicable in its stead. In such a case, the special/general or prior/subsequent distinction does not work as a conflict resolution technique but as an interpretative guideline indicating that one rule should be interpreted in view of the other, of which it is only an instance or an elaboration.[24]

29. Alternatively, the general or earlier principle may be understood to articulate a rationale or a purpose to the specific (or later) rule. Thus, for instance, the fisheries provisions in the United Nations Convention on the Law of the Sea may be seen as background principles, of which any particular treaties concerning fishery resources could be seen as instances or elaborations.[25]

30. For example, in the *Southern Bluefin Tuna* case (2000), Japan had argued *inter alia* that the 1993 Convention for the Conservation of Southern Bluefin Tuna applied to the case both as *lex specialis* and *lex posterior*, excluding the application of the 1982 United Nations Convention on the Law of the Sea.[26] The arbitration tribunal, however, held that both the 1982 and the 1993 instruments were applicable. The tribunal recognized that

> it is a commonplace of international law and State practice for more than one treaty to bear upon a particular dispute. There is no reason why a given act of a State may not violate its obligations under more than one treaty. There is frequently a parallelism of treaties, both in their substantive content and in their provisions for settlement of disputes arising thereunder. The current range of international legal obligations benefits from a process of accretion and cumulation; in the practice of States, the conclusion of an implementing convention does not necessarily vacate the obligations imposed by the framework convention upon the parties to the implementing convention. The broad provisions for the promotion of universal respect for and observance of human rights, and the international obligation to co-operate for the achievement of those purposes, found in Articles 1, 55 and 56 of the Charter of the United Nations, have not been discharged for States Parties by their ratification of the Human Rights Covenants and other human rights treaties … Nor is it clear that the particular provisions of the 1993 Convention exhaust the extent of the relevant obligations of [the United Nations Convention on the Law of the Sea]. In some respects, [the United Nations Convention on the Law of the Sea] may be viewed as extending beyond the reach of the [Convention for the Conservation of Southern Bluefin Tuna].[27]

31. This is quite an appropriate description of a number of situations that may arise between a general multilateral treaty and specific bilateral or regional treaties. In such cases, the characterization of the latter as *lex specialis* or *lex posterior* may not always lead to the setting aside of the general treaty. Instead, that earlier and general instrument remains "in the background", controlling the way the later and more specific rules are being interpreted and applied.[28] Whether this relationship is then conceived in terms of an (informal) hierarchy or a division of labour seems beside the point. However, none of this takes away the difficulty of appreciating what it means for the later or more specific instrument to involve a "development" or "application" of a more general instrument and when it is intended to be an exception or a limitation thereto. Any technical rule that purports to "develop" the freedom of the high seas is also a limitation of that freedom to the extent that it lays down specific conditions and institutional modalities that must be met in its exercise.

32. The Commission has traditionally been aware of the difficulty of making a clear distinction between "progressive development" and "codification". An analogous difficulty affects any attempt to distinguish clearly between "application" of a general rule and "limitation" of or "deviation" from it. All this is dependent on how one interprets the general law to which the specific or later instrument seeks to add something. Care should therefore be taken not to infer that a special law need automatically be interpreted "widely" or "narrowly". How it is interpreted depends on how the relationship between the general and the special law is conceived ("application" or "exception"?). This, again, requires seeing the relationship as part of some "system".

33. It is often said that law is a "system". By this, no more need be meant than that the various decisions, rules and principles of which the law consists do not appear randomly related to each other.[29] Although there may be disagreement among lawyers about just how the systemic relationship between the various decisions, rules and principles should be conceived, there is seldom disagreement that it is one of the tasks of legal reasoning to establish it.

34. This cannot be understood as reaffirming something that already "exists" before the systemic effort itself. There is no single legislative will behind international law. Treaties and custom come about as a result of conflicting motives and objectives—they are "bargains" and "package deals" and often result from spontaneous reactions to events in the environment. But if legal reasoning is understood as a *purposive* activity, then it follows that it should be seen not merely as the mechanical application of apparently random rules, decisions or behavioural patterns, but as the operation of a whole that is directed toward some

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[24] See N. MacCormick, *Legal Reasoning and Legal Theory,* Oxford, Clarendon Press, 1978, p. 156 and generally pp. 152–194. There are many understandings of the nature of the difference between "rules" and "principles". For these, see M. Koskenniemi, "General principles: reflexions on constructivist thinking in international law", in M. Koskenniemi (ed.), *Sources of International Law,* Aldershot, Ashgate, 2000, p. 359. For a recent discussion of the operation of the rule/principle dichotomy in international law (self-determination), see K. Knop, *Diversity and Self-Determination in International Law*, Cambridge, Cambridge University Press, 2002, p. 20.

[25] This also seems to be affirmed in article 87 of the United Nations Convention on the Law of the Sea.

[26] *Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan*, decision of 4 August 2000 (jurisdiction and admissibility), UNRIAA, vol. XXIII (Sales No. E/F.04.V.15), p. 1, at p. 23, para. 38 (*c*).

[27] *Ibid.*, pp. 40–41, para. 52.

[28] For example, article 4 of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks provides that the Agreement "shall be interpreted and applied in the context of and in a manner consistent with the Convention".

[29] The view that holds international law a "primitive" structure bases itself on the claim that the rules of international law do not form a "system" but merely an aggregate of (primary) rules that States have contracted. See H. L. A. Hart, *The Concept of Law*, Oxford, Oxford University Press, 1961, pp. 208–231.

human objective. Again, lawyers may disagree about what the objective of a rule or a behaviour is, but it does not follow that no such objective at all can be envisaged. Much legal interpretation is geared towards linking an unclear rule to a purpose and thus, by showing its position within some system, to providing a justification for applying it in one way rather than another. Thus, while the conclusion of a general treaty may sometimes be intended to set aside previously existing scattered provisions in some area—for example, the 1982 United Nations Convention on the Law of the Sea explicitly set aside the Geneva Conventions on the Law of the Sea of 1958[30]—sometimes no such intention can be inferred. The adoption in 1966 of the two universal human rights covenants (the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights) did not imply any setting aside or overriding of the (more specific) provisions of the Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights) of 1950.[31] Whether the later regulation intends to preserve or push aside previous legislation cannot, again, be decided *in abstracto*. This can only be decided through interpretation.

35. Legal interpretation, and therefore legal reasoning, builds systemic relationships between rules and principles by envisaging them as part of some human effort or purpose. Far from being merely an "academic" aspect of the legal craft, systemic thinking penetrates all legal reasoning, including the practice of applying the law by judges and administrators.[32] This results precisely from the "clustered" form in which legal rules and principles appear. But it may also be rationalized in terms of a *political obligation* on those who apply the law to make their decisions coherent with the preferences and expectations of the community whose law they administer.[33]

36. It is a preliminary step to any act of applying the law that a *prima facie* view of the matter is formed. This includes, among other things, an initial assessment of what might be the applicable rules and principles. The result will often be that a number of standards may seem *prima facie* relevant. A choice is needed, along with a justification for having recourse to one instead of another. Moving from the *prima facie* view to a conclusion, legal reasoning will either have to seek to harmonize apparently conflicting standards through interpretation or, if that seems implausible, to establish definite relationships of priority among them. Here, interpretative maxims and conflict resolution techniques such as *lex specialis*, *lex posterior* or *lex superior* become useful. They enable a systemic relationship to be seen between two or more rules and may thus justify a particular choice of applicable standard and a particular conclusion. They do not do this mechanically, however, but rather as "guidelines",[34] suggesting a pertinent relationship among the relevant rules in view of the need for the conclusion to be consistent with the perceived purposes or functions of the legal system as a whole.[35] The fact that this takes place in an indeterminate setting takes nothing away from its importance. Through it, the legal profession articulates law and gives it shape and direction. Instead of a random collection of directives, the law begins to assume the shape of a purposive (legal) system.

D. Harmonization: systemic integration

37. In international law, there is a strong presumption against normative conflict. Treaty interpretation is diplomacy, and it is the business of diplomacy to avoid or mitigate conflict. This extends to adjudication as well. As Rousseau describes the duties of a judge, in one of the earlier but still more useful discussions of treaty conflict:

> *lorsqu'il est en présence de deux accords de volontés divergents, il doit être tout naturellement porté à rechercher leur coordination plutôt qu'à consacrer leur antagonisme.*[36]

38. This has emerged into a widely accepted principle of interpretation and it may be formulated in many ways. It may appear as the rule of thumb that, when creating new obligations, States are assumed not to derogate from their existing obligations. Jennings and Watts, for example, note the presence of a

> presumption that the parties intend something not inconsistent with generally recognised principles of international law, or with previous treaty obligations towards third States.[37]

39. As the International Court of Justice stated in the *Right of passage over Indian territory* case:

> [i]t is a rule of interpretation that a text emanating from a Government must, in principle, be interpreted as producing and as intended to produce effects in accordance with existing law and not in violation of it.[38]

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[30] See article 311 of the United Nations Convention on the Law of the Sea.

[31] See article 44 of the International Covenant on Civil and Political Rights and comment in K. Zemanek, "The legal foundations of the international system: general course on public international law", *Recueil des cours de l'Académie de droit international de La Haye, 1997*, vol. 266, pp. 227–228. See also Sadat-Akhavi (footnote 21 above), pp. 120–124.

[32] For "systematization"—that is, the establishment of systemic relationships between legal rules—as a key aspect of legal reasoning, see, for example, A. Aarnio, *Denkweisen der Rechtswissenschaft,* Vienna, Springer, 1979, pp. 50–77 and, generally, J. Raz, *The Concept of a Legal System: An Introduction to the Theory of Legal System*, 2nd ed., Oxford, Clarendon Press, 1980. For a treatment of international law through a sociologically oriented ("Luhmannian") systems theory, see A. Fischer-Lescano, "Die Emergenz der Globalverfassung", *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht,* vol. 63 (2003), p. 717.

[33] This view is famously articulated in R. Dworkin, *Taking Rights Seriously,* Cambridge (Massachusetts), Harvard University Press, 1977.

[34] As suggested by the comments of the United States of America on the Waldock draft of what became articles 30 and 31 of the 1969 Vienna Convention. See sixth report on the law of treaties, by Sir Humphrey Waldock, Special Rapporteur, *Yearbook ... 1966*, vol. II, document A/CN.4/186 and Add.1–7, p. 94.

[35] For the techniques of "second-order justification" that enable the resolution of hard cases (*i.e.* cases where no "automatic" decisions are possible) and that look either to the consequences of a decision or to the systemic coherence and consistency of the decision with the legal system (seen as a purposive system), see MacCormick (footnote 24 above), pp. 100–128.

[36] "[W]hen faced with two treaties that differ in intent, [the judge] must quite naturally be inclined to seek to reconcile them rather than entrench their divergences": C. Rousseau, "De la compatibilité des normes juridiques contradictoires dans l'ordre international", RGDIP, vol. 39 (1932), p. 133, at p. 153.

[37] R. Jennings and A. Watts (eds.), *Oppenheim's International Law*, 9th ed., Harlow, Longman, 1992, p. 1275. For the wide acceptance of the presumption against conflict—that is, the suggestion of harmony—see also Pauwelyn, *Conflict of Norms…* (footnote 21 above), pp. 240–244.

[38] *Case concerning right of passage over Indian territory*, Preliminary Objections, Judgment of 26 November 1957, *I.C.J. Reports 1957*, p.125, at p. 142.

40. There are other reasons, too, why one might wish to avoid formal statements confirming incompatibility. As noted above, this may often be a matter of political assessment. In the controversial *Austro-German Customs Union* case[39] from 1931, for example, the Permanent Court of International Justice observed that the projected union with Germany violated the obligation Austria had undertaken in the Treaty of Peace between the Allied and Associated Powers and Germany (Treaty of Versailles) and the Treaty of Peace between the Allied and Associated Powers and Austria (Treaty of Saint-Germain) not to alienate its independence. As Judge Anzilotti pointed out, the Court was here invited to decide a wholly political question. What legal standards were there to instruct on whether a customs union between Austria and Germany, with all the history of their relationship and its linkage to European problems, would encroach on Austria's independence? In this regard, a treaty with Germany was of a completely different nature than a treaty with, say, Czechoslovakia.[40] The potential "fragmentation" at issue in the *Austro-German* case highlights the linkage of the legal problem of compatibility with the preferences of the actors and the need for some subtlety in coping with them. A straightforward statement of incompatibility might sometimes be strictly inadvisable.

41. There is relatively little—in fact, until recently, astonishingly little—judicial or arbitral practice on normative conflicts. As Borgen suggests, this must result in part from the wish of States parties to negotiate issues of apparent conflict between themselves and not to give the power to outsiders to decide on what may appear as coordination difficulties that may have their roots in the heterogeneous interests represented in national administrations. And negotiation is rarely about the "application" of conflict rules rather than trying to find a pragmatic solution that could re-establish the disturbed harmony. Although it might be interesting to discuss the way States have resolved such problems by negotiation, the fact that any results attained have come about through contextual bargaining makes it difficult to use them as the basis for some customary rule or other.[41]

42. However, although harmonization often provides an acceptable outcome for normative conflict, there is a definite limit to harmonization: "[it] may resolve apparent conflicts; it cannot resolve genuine conflicts".[42] This does not mean that there are normative conflicts whose intrinsic nature renders them unsuitable for harmonization. Between the parties, anything may be harmonized as long as the will to harmonize it is present. Sometimes, however, that will may not be present, perhaps because the positions of the parties are so far apart from each other—something that may ensue from the importance of the clash of interests or preferences that is expressed in the normative conflict, or from the sense that the harmonizing solution would sacrifice the interests of the party in a weaker negotiating position. In this respect, there is a limit to how far a "coordinating" solution may be applied to resolve normative conflicts. Especially where a treaty lays out clearly formulated rights or obligations of legal subjects, care must be taken not to see these merely as negotiating chips in the process of reaching a coordinating solution.

43. When normative conflicts come to be settled by third parties, the pull of harmonization remains strong, though perhaps not as compelling as between the parties themselves. Because ascertaining the presence of a conflict already requires interpretation, it may often be possible to deal with potential conflicts by simply ignoring them, especially if none of the parties has raised the question. But when a party raises a point about conflict and about the precedence of one obligation over another, then a stand must be taken. Of course, in such a case, it is still possible to reach the conclusion that, although the two norms seem to point in diverging directions, it is still possible, after some adjustment, to apply or understand them in such way that no overlap or conflict will remain. This may sometimes call for the application of the kinds of conflict resolution rules which the bulk of this report will deal with. But it may also take place through an attempt to reach a resolution that integrates the conflicting obligations in some optimal way into the general context of international law. Inasmuch as the question of conflict arises with regard to the fulfilment of the *objectives* (instead of the obligations) of the different instruments, little may be done by the relevant body. In any case, a third-party settlement body is always limited in its jurisdiction.

E. Jurisdiction versus applicable law

44. In debates about fragmentation and normative conflict, the suggestion is sometimes made that, whatever the relationships between legal rules and principles as conceived under *general international law*, those relationships cannot be applied as such by treaty bodies or dispute settlement organs whose jurisdiction is limited to or by their constituting instruments. A human rights body, for example, should have no business applying an agreement covered by the World Trade Organization (WTO). This suggestion, which in essence is merely an argument about the self-contained nature of some regimes, will be discussed in detail in chapter II, section C, below. Thus, only a few remarks here will suffice.

45. The jurisdiction of most international tribunals is limited to particular types of dispute or to disputes arising under particular treaties. A limited jurisdiction does not, however, imply a limitation of the scope of the law applicable in the interpretation and application of those treaties. In the WTO context, in particular, a distinction has been made between two notions: jurisdiction and applicable law.[43] While the WTO Understanding on Rules and Pro-

[39] *Customs Régime between Germany and Austria (Protocol of March 19th, 1931)*, Advisory Opinion of 5 September 1931, *P.C.I.J. Series A/B*, No. 41, p. 36.

[40] As pointed out in Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), pp. 187–188.

[41] Borgen (see footnote 10 above), pp. 605–606 (but see also his discussion of diplomatic practice, pp. 606–610).

[42] *Ibid.*, p. 640 (quoting Pauwelyn, *Conflict of Norms…* (see footnote 21 above), p. 272).

[43] L. Bartels, "Applicable law in WTO dispute settlement proceedings", *Journal of World Trade*, vol. 35, No. 3 (2001), p. 499, at pp. 501–502; D. Palmeter and P. C. Mavroidis, "The WTO legal system: sources of law", AJIL, vol. 92, No. 3 (July 1998), p. 398, at pp. 398–399; J. Pauwelyn, "The role of public international law in the WTO: how far can we go?", *ibid*., vol. 95, No. 3 (July 2001), p. 535, at pp. 554–566; G. Marceau, "WTO dispute settlement and human

cedures Governing the Settlement of Disputes limits jurisdiction only to claims that arise under agreements covered by WTO, there is no explicit provision identifying the scope of applicable law.[44] By contrast, for example, Article 38 of the Statute of the International Court of Justice, by listing the sources that the Court should have recourse to in deciding cases, does identify the law to be applied by the Court.[45] Similarly, the United Nations Convention on the Law of the Sea provides that the International Tribunal on the Law of the Sea has "jurisdiction over any dispute concerning the interpretation or application of this Convention" and that, when deciding cases, it "shall apply this Convention and other rules of international law not incompatible with this Convention".[46] As no such explicit provision exists in the Understanding on Rules and Procedures Governing the Settlement of Disputes, the question of the scope of applicable law has seemed problematic. However, WTO is certainly not the only context in which a treaty body has been set up without any express mention that it should apply international law. As will be argued at length, especially in chapters II and V below, treaties covered by WTO are creations of, and constantly interact with, other norms of international law.[47] As the WTO Appellate Body stated in its very first case, "the General Agreement [on Tariffs and Trade of 1994] is not to be read in clinical isolation from public international law".[48] What this means in practice is by no means straightforward, but it states what has never been seriously doubted by any international tribunal or treaty-body: that, even as the jurisdiction of a body is limited (as it always—even in the case of the International Court of Justice—is), its exercise of that jurisdiction is controlled by the normative environment.

rights", EJIL, vol. 13, No. 4 (2002), p. 753, at pp. 757–779; A. Lindroos and M. Mehling, "Dispelling the chimera of 'self-contained regimes' international law and the WTO", EJIL, vol. 16, No. 5 (2005), p. 857, at pp. 860–866.

[44] Articles 1, para. 1; 3, para. 2; 7; 11 and 19, para. 2, of the Understanding on Rules and Procedures Governing the Settlement of Disputes have been used to argue both in favour of and against a more extensive scope of applicable law in WTO dispute settlement. See, for example, Bartels, "Applicable law…" (footnote 43 above), pp. 502–509, and Lindroos and Mehling, "Dispelling the chimera of 'self-contained regimes'…" (footnote 43 above), pp. 873–875; see also WTO Panel report, *Korea—Measures Affecting Government Procurement*, WT/DS163/R, adopted 19 June 2000, para. 7.101, footnote 755.

[45] See, for example, Bartels, "Applicable law…" (footnote 43 above), pp. 501–502, and Palmeter and Mavroidis (footnote 43 above), pp. 398–399.

[46] Articles 288, para. 1, and 293, para. 1, of the United Nations Convention on the Law of the Sea.

[47] For instance, Palmeter and Mavroidis (see footnote 43 above), pp. 398–399; J. P. Trachtman, "The domain of WTO dispute resolution", *Harvard International Law Journal*, vol. 40, No. 2 (spring 1999), p. 333; Bartels, "Applicable law…" (footnote 43 above), pp. 501–502; Pauwelyn, "The role of public international law in the WTO…" (footnote 43 above), pp. 554–566; Pauwelyn, *Conflict of Norms…* (footnote 21 above); Marceau, "WTO dispute settlement and human rights" (footnote 43 above), pp. 757–779; Lindroos and Mehling, "Dispelling the chimera of 'self-contained regimes'…" (footnote 43 above), pp. 860–866.

[48] *United States—Standards for Reformulated and Conventional Gasoline*, WTO Appellate Body report, WT/DS2/AB/R, adopted 20 May 1996, p. 17. Similarly, for example, in *Korea—Measures Affecting Government Procurement* (see footnote 44 above), the Panel stated in paragraph 7.96 that "[c]ustomary international law applies generally to the economic relations between the WTO [m]embers. Such international law applies to the extent that the WTO treaty agreements do not 'contract out' from it."

Chapter II

Conflicts between special law and general law

46. This chapter deals with the case where a normative conflict is characterized by a relationship of "speciality" *versus* "generality" between the conflicting norms. The chapter is in five parts. Section A provides a framework for the discussion of conflicts where the speciality or generality of conflicting norms becomes an issue. Section B outlines the role and nature of the *lex specialis* rule as a pragmatic mechanism for dealing with situations where two rules of international law that are both valid and applicable deal with the same subject matter differently.[49] Section C gives an overview of the case law and academic discussion on "self-contained regimes". Section D is a brief discussion of regionalism in international law. Section E presents conclusions on conflicts between special law and general law.

A. Introduction

47. One of the most well-known techniques for analysing normative conflicts focuses on the generality *versus* the particularity of the conflicting norms. In this regard, it is possible to distinguish three types of conflict:

(*a*) Conflicts between general law and a particular, unorthodox interpretation of general law;

(*b*) Conflicts between general law and a particular rule that claims to exist as an exception to it; and

(*c*) Conflicts between two types of special law.

48. Fragmentation appears differently in each of these three types of conflict. While the first type is really about the effects of differing legal interpretations in a complex institutional environment, and therefore falls strictly speaking outside the scope of the Commission's study, the latter two denote genuine types of conflict where the law itself (in contrast to some putative interpretation of it) appears differently depending on which normative framework is used to examine it.[50] Each of the three types of conflict is illustrated briefly below.

1. Fragmentation through conflicting interpretations of general law

49. In the *Tadić* case in 1999, the Appeals Chamber of the International Tribunal for the Former Yugoslavia

[49] To say that a rule is "valid" is to point to its being a part of the ("valid") legal order. To say it is applicable means that it provides rights, obligations or powers to a legal subject in a particular situation.

[50] See discussion of the dependence of normative conflict of different conceptual frameworks in Koskenniemi and Leino, "Fragmentation of international law? …" (footnote 14 above), pp. 553–579.

considered the responsibility of Serbia and Montenegro for the acts of the Bosnian Serb militia in the conflict in the former Yugoslavia. For this purpose it examined the jurisprudence of the International Court of Justice in the *Military and Paramilitary Activities in and against Nicaragua* case of 1986. In the latter case, the United States was not held responsible for the acts of the Nicaraguan *contras* despite organizing, financing, training and equipping them. Such involvement failed to meet the test of "effective control".[51] The International Tribunal for the Former Yugoslavia, for its part, concluded that "effective control" set too high a threshold for holding an outside power legally accountable for domestic unrest. It was sufficient for the power to have "a role in organising, coordinating or planning the military actions of the military group"—*i.e.* to exercise "overall control" over them—for the conflict to be an "international armed conflict".[52]

50. The contrast between *Military and Paramilitary Activities in and against Nicaragua* and *Tadić* is an example of a normative conflict between an earlier and a later interpretation of a rule of general international law.[53] *Tadić* does not suggest that "overall control" exists alongside "effective control", either as an exception to the general law or as a special (local) regime governing the conflict in the former Yugoslavia. It seeks to *replace* that standard altogether.

51. The point is not to take a stand in favour of either *Tadić* or *Military and Paramilitary Activities in and against Nicaragua*, only to illustrate the type of normative conflict where two institutions faced with analogous facts interpret the law in differing ways. This is a common occurrence in any legal system, but its consequences for the international legal system, which lacks a proper institutional hierarchy, might seem particularly problematic. Imagine, for example, a case where two institutions interpret the general (and largely uncodified) law concerning title to territory differently. For one institution, State A has validly acquired title to a piece of territory that another institution regards as part of State B. In the absence of a superior institution that could decide such a conflict, States A and B could not undertake official acts with regard to the territory in question with confidence that those acts would be given legal effect by outside powers or institutions. Similar problems would emerge in regard to any conflicting interpretations concerning a general law granting legal status.

52. Differing views about the content of general law create two types of problem. First, they diminish legal security. Legal subjects are no longer able to predict the reaction of official institutions to their behaviour and to plan their activity accordingly. Second, they place legal subjects in an unequal position *vis-à-vis* each other. The rights they enjoy depend on which jurisdiction is seized to enforce them. Most domestic laws deal with these problems by means of appeals. An authority (usually a court) at a higher hierarchical level will provide a formally authoritative ruling.[54] Such authority is not normally present in international law. To the extent that such conflicts emerge and are considered a problem (which need not always be the case), they can only be dealt with by legislative or administrative means. Either States adopt a *new law* that settles the conflict, or the institutions will seek to coordinate their jurisprudence in the future.

2. Fragmentation through the emergence of special law as an exception to general law

53. A different case is one where an institution makes a decision that deviates from how situations of a similar type have been decided in the past because the new case is held not to come under the general rule, but to form an *exception* to it. This may be illustrated by how human rights organs have dealt with reservations. In the *Belilos v. Switzerland* case (1988), the European Court of Human Rights viewed a declaration made by Switzerland in its instrument of ratification as in fact a reservation, struck it down as incompatible with the object and purpose of the European Convention on Human Rights, and held Switzerland bound by the Convention "irrespective of the validity of the declaration".[55] In subsequent cases, the European Court has pointed out that the normal rules on reservations to treaties do not as such apply to human rights law. In the Court's view:

> a fundamental difference in the role and purpose of the respective tribunals [*i.e.* of the International Court of Justice and the European Court of Human Rights], coupled with the existence of a practice of unconditional acceptance … , provides a compelling basis for distinguishing Convention practice from that of the International Court.[56]

54. Again, the point is neither to endorse nor to criticize the European Court of Human Rights but to point to a phenomenon which, whatever one may think about it, has to do with the emergence of exceptions or patterns of exception in regard to some subject matter that deviate from the general law and that are justified because of the special properties of that subject matter.

3. Fragmentation as differentiation between types of special law

55. Finally, a third case is a conflict between different types of special law. This may be illustrated by reference to debates on trade and the environment. In the 1998 *EC—Hormones* case, the WTO Appellate Body considered the

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[51] *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgment of 27 June 1986, *I.C.J. Reports 1986*, p. 14, at pp. 64–65, para. 115.

[52] *Prosecutor v. Duško Tadić*, Appeals Chamber, International Tribunal for the Former Yugoslavia, case No. IT-94-1-A, judgment of 15 July 1999, *Judicial Reports 1999*, p. 3, at pp. 47–62, paras. 115, 116–145; ILM, vol. 38, No. 6 (November 1999), pp. 1540–1546.

[53] This need not be the only—nor indeed the correct—interpretation of the contrast between the two cases. As some commentators have suggested, the cases can also be distinguished from each other on the basis of their facts. In this case, there would be no normative conflict. Whichever view seems better founded, the point of principle remains: it cannot be excluded that two tribunals faced with similar facts may interpret the applicable law differently.

[54] From a theoretical perspective, the position of courts is absolutely central in managing the functional differentiation—*i.e.* fragmentation—within the law. Coherence here is based on the duty to decide even "hard cases". See, in this regard, especially N. Luhmann, *Law as a Social System,* (trans. K. A. Zeigert, ed. F. Kastner and others), Oxford, Oxford University Press, 2004, in particular pp. 284–296.

[55] *Belilos v. Switzerland*, judgment of 29 April 1988, European Court of Human Rights, Series A, No. 132, p. 28, para. 60.

[56] *Loizidou v. Turkey*, preliminary objections, judgment of 23 March 1995, European Court of Human Rights, Series A, No. 310, p. 29, para. 85.

status of the so-called "precautionary principle" under treaties covered by WTO, especially the Agreement on the Application of Sanitary and Phytosanitary Measures. It concluded that, whatever the status of that principle in "international environmental law", it had not become binding for the WTO.[57] This approach suggests that "environmental law" and "trade law" might be governed by different principles. Which rule to apply would then depend on how a case would be qualified in this regard. This might seem problematic, as denominations such as "trade law" or "environmental law" have no clear boundaries. For example, maritime transport of oil has links to both trade and the environment, as well as to rules on the law of the sea. Should the obligations of a ship owner in regard to the technical particularities of a ship, for instance, be determined by reference to what is reasonable from the perspective of oil transport considered as a commercial activity or as an environmentally dangerous activity? The responses are bound to vary depending on which is chosen as the relevant frame of legal interpretation.

B. The function and scope of the *lex specialis* maxim

1. *Lex specialis* in international law

(a) *Legal doctrine*

56. The principle that special law derogates from general law is a widely accepted maxim of legal interpretation and technique for the resolution of normative conflicts.[58] It suggests that, if a matter is regulated by a general standard as well as by a more specific rule, then the latter should take precedence over the former. The relationship between the general standard and the specific rule may, however, be conceived in two ways. One is the case where the specific rule should be read and understood within the confines or against the background of the general standard, typically as an elaboration, updating or technical specification thereof.[59] The specific and the general both point, as it were, in the same direction.

57. Sometimes *lex specialis* is, however, understood more narrowly to cover the case where two legal provisions, both of which are valid and applicable, are in no express hierarchical relationship and provide incompatible direction on how to deal with the same set of facts. In such a case, *lex specialis* appears as a conflict resolution technique. It suggests that, instead of the (general) rule, one should apply the (specific) exception.[60] In both cases, however, priority falls on the provision that is "special", *i.e.* the rule with a more precisely delimited scope of application.[61]

58. Nonetheless, the maxim does not admit of automatic application. In particular, two sets of difficulties may be highlighted. First, it is often hard to distinguish what is "general" and what is "particular", and, by focusing on the substantive coverage of a provision or the number of legal subjects to whom it is directed, one may arrive at different conclusions. An example would be provided by the relationship between a territorially limited general regime and a universal treaty on some specific subject.[62] Second, the principle also has an unclear relationship to other maxims of interpretation or conflict resolution techniques, such as the principle *lex posterior derogat legi priori* (later law overrides prior law), and may be offset by normative hierarchies or informal views about "relevance" or "importance".[63]

59. The idea that special enjoys priority over general has a long pedigree in international jurisprudence as well. Its rationale was already being clearly expressed by Grotius:

> *What rules ought to be observed in such cases* [*i.e.* where parts of a document are in conflict]. … Among agreements which are equal … that should be given preference which is most specific and approaches most nearly to the subject in hand; for special provisions are ordinarily more effective than those that are general.[64]

60. This passage refers to two reasons why the *lex specialis* rule is so widely accepted. A special rule is more to the point ("approaches most nearly to the subject in hand") than a general one and it regulates the matter more effectively ("are ordinarily more effective") than general rules. This could also be expressed by saying that special rules are better able to take account of particular circumstances. The need to comply with them is felt more acutely than is the case with general rules.[65] They have greater clarity and definiteness and are thus often felt to be

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[57] *EC Measures Concerning Meat and Meat Products (Hormones)*, WTO Appellate Body report, WT/DS26/AB/R, WT/DS48/AB/R, adopted 13 February 1998, paras. 123–125.

[58] The principle *lex specialis derogat legi generali* has a long history; the principle was included in the *Corpus Iuris Civilis*. See Papinian, Dig. 48, 19, 41 and Dig. 50, 17, 80. The latter states: "*In toto iure generi per speciem derogatur et illud potissimum habetur, quod ad speciem derectum est"* ("In the whole of law, species takes precedence over genus, and anything that relates to species is regarded as most the important") (*The Digest of Justinian*, vol. IV, Philadelphia, University of Pennsylvania Press, 1985, Latin text ed. T. Mommsen and P. Krueger, trans. ed. A. Watson). Some of its alternative formulations are "*generalibus specialia derogant*", "*generi per speciem derogatur*" and "*specialia generalibus, non generalia specialibus*". This report does not deal with another close variant, namely the *ejusdem generis* rule, *i.e.* the rule of interpretation according to which special words control the meaning of general ones. For a discussion, see A. D. McNair, *The Law of Treaties,* Oxford, Clarendon Press, 1961, pp. 393–399.

[59] This understanding appears, for example, in Mus (see footnote 21 above), at p. 218. Fitzmaurice, too, thinks there is *lex specialis* when "a matter governed by a specific provision … is thereby taken out of the scope of a general provision" (G. Fitzmaurice, "The law and procedure of the International Court of Justice 1951–4: treaty interpretation and other treaty points", *British Year Book of International Law 1957*, vol. 33, p. 203, at p. 236).

[60] A. Peczenik, *Juridikens metodproblem,* Stockholm, Gebers, 1980, p. 106.

[61] That is, when the description of the scope of application in one provision contains at least one quality that is not singled out in the other. K. Larenz, *Methodenlehre der Rechtswissenschaft,* Berlin, Springer, 1975, pp. 251–252.

[62] Such conflicts, Jenks suggests, can only be decided on their merits. See Jenks (footnote 8 above), p. 447.

[63] For different possibilities, see H. T. Klami, "Legal heuristics: a theoretical skeleton", *Oikeustiede–Jurisprudentia* XV (1982), pp. 46–53. See also Sadat-Akhavi (footnote 21 above), pp. 189–191. For examples of cases where a more general treaty overrides a more specific one because of its "relevance" or "overriding character", see *ibid.,* pp. 114–125 and 125–131 and *passim*. Ian Sinclair speaks of a mixture of techniques and maxims in *The Vienna Convention on the Law of Treaties*, 2nd ed., Manchester, Manchester University Press, 1984, pp. 95–98.

[64] H. Grotius, *De Jure Belli ac Pacis: Libri Tres*, J. Brown Scott (ed.), *The Classics of International Law*, Oxford, Clarendon Press, 1925, book II, chap. XVI, sect. XXIX, p. 428.

[65] For the reasoning behind the need to prefer "special" over "general", see also Dupuy, "L'unité de l'ordre juridique international…" (footnote 14 above), pp. 428–429.

"harder" or "more binding" than general rules, which may stay in the background and be applied only rarely. Moreover, *lex specialis* may also seem useful as it may provide better access to what the parties may have willed.[66]

61. It is therefore no wonder that the literature generally accepts *lex specialis* as a valid maxim of interpretation or conflict resolution technique in public international law, too, though it is seldom given lengthy treatment. The classical writers (Pufendorf, de Vattel) accepted it among other techniques as a matter of course.[67] Anzilotti gave it a rather absolute formulation: "*in toto iure genus per speciem derogatur; la norme de droit particulier l'emporte sur la norme générale*". As was consistent with his voluntarism, a treaty between two States would prevail over a multilateral treaty just as the latter would have priority over customary law.[68] For him, as, for example, for Charles Rousseau, the power of the *lex specialis* maxim lay in the way in which it seemed to realize party will.[69] For Georges Scelle, by contrast, a special rule would only rarely be allowed to override what he called "*l'économie d'ensemble*" of the general law. It followed from his sociological anti-voluntarism that general regulation, expressive of an objective sociological interest, would always prevent contracting out by individual States.[70]

62. It seems clear, however, that both approaches are too absolute—either too respectful of the wills of individual States or not respectful enough of the need to deviate from abstract maxims. Later lawyers have stressed the relativity of the *lex specialis* principle, the need to balance it with *lex posterior,* and the hierarchical status that the more general provision may enjoy.[71]

63. The Commission has outlined its application at some length in the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts:

Article 55. Lex specialis

These articles do not apply where and to the extent that the conditions for the existence of an internationally wrongful act or the content or implementation of the international responsibility of a State are governed by special rules of international law.

64. This provision establishes normative priority for any special rules in its field of application. Or, as the Commission explains in the commentary, it means "that the present articles operate in a residual way".[72] The provision clearly expresses the wish of the Commission to allow States to develop, apply and derogate from the general rules of State responsibility by agreement between themselves. Yet, of course, such power cannot be unlimited: rules that derogate must have at least the same rank as those they derogate from. It is hard to see how States could, for example, derogate from those aspects of the general law on State responsibility that define the conditions of operation of "serious breaches of obligations under peremptory norms of general international law".[73]

65. In doctrine, *lex specialis* is usually discussed as one factor among others in treaty interpretation (arts. 31–33 of the 1969 Vienna Convention) or in dealing with the question of successive treaties (art. 30 of the 1969 Vienna Convention, especially in relation to the principle of *lex posterior*).[74] Although the principle did not find its way into the text of the Convention, it was still observed during the drafting process that, among techniques for resolving conflicts between treaties, it was useful to pay attention to the extent to which a treaty might be "special" in relation to another treaty.[75]

66. But there is no reason to limit the operation of *lex specialis* to relationships between treaties. Jennings and Watts, for instance, indicate that the principle "has sometimes been applied in order to resolve apparent conflicts between two differing and potentially applicable

[66] See also Pauwelyn, *Conflict of Norms…* (footnote 21 above), p. 388. For the voluntarist understanding of *lex specialis*, rebuttable in view of other evidence, see N. Kontou, *The Termination and Revision of Treaties in the Light of New Customary International Law,* Oxford, Clarendon Press, 1994, p. 142 and references.

[67] S. Pufendorf, *Le droit de la nature et des gens, ou Système général des principes les plus importants de la morale, de la jurisprudence, et de la politique* (trans. J. Barbeyrac), Basel, Thourneisen, 1732, book V, chap. XII, pp. 138–140; E. de Vattel, *Le droit des gens, ou Principes de la loi naturelle, appliqués à la conduite et aux affaires des nations et des souverains* (London, 1758), Washington, D.C., Carnegie Institution, 1916, vol. I, book II, chap. XVII, para. 316.

[68] D. Anzilotti, *Cours de droit international*, vol. I (trans. G. Gidel), Paris, Sirey, 1929, p. 103.

[69] Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), p. 177.

[70] G. Scelle, *Manuel de droit international public*, Paris, Domat-Montchrestien, 1948, p. 642.

[71] See, for example, A. Cavaglieri, "Règles générales du droit de la paix", *Recueil des cours de l'Académie de droit international de La Haye, 1929-I,* vol. 26, p. 334; G. E. do Nascimento e Silva, "Le facteur temps et les traités", *Recueil des cours de l'Académie de droit international de La Haye, 1977-I*, vol. 154, p. 246.

[72] Para. (2) of the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook … 2001*, vol. II (Part Two) and corrigendum, p. 140.

[73] Commentaries to arts. 40–41 and 48, *ibid.*, pp. 112–116, 126–128.

[74] In addition to sources already cited, see, for example, Rousseau, "De la compatibilité des normes juridiques contradictoires…" (footnote 36 above), pp. 133–192, especially pp. 177–178, 188–189; Jenks (footnote 8 above), pp. 401–453, especially pp. 446–447; M. Zuleeg, "Vertragskonkurrenz im Völkerrecht. Teil I: Verträge zwischen souveränen Staaten", *German Yearbook of International Law*, vol. 20 (1977), pp. 247, especially pp. 256–259; W. Czapliński and G. Danilenko, "Conflicts of norms in international law", *Netherlands Yearbook of International Law*, vol. XXI (1990), p. 3, at pp. 20–21; Kontou (footnote 66 above), pp. 141–144; M. Fitzmaurice and O. Elias, *Contemporary Issues in the Law of Treaties*, Utrecht, Eleven International Publishing, 2005, especially pp. 314–348. See also M. S. McDougal, H. D. Lasswell and J. C. Miller, *The Interpretation of International Agreements and World Public Order: Principles of Content and Procedure,* New Haven/Dordrecht, New Haven Press/Martinus Nijhoff, 1994, pp. 199–206; Sinclair (footnote 63 above), p. 98; A. Aust, *Modern Treaty Law and Practice*, Cambridge, Cambridge University Press, 2000, p. 201. See also P. Daillier and A. Pellet, *Droit international public*, 7th ed., Paris, LGDJ, 2002, p. 271 (discussing *lex specialis* in the context of art. 30, para. 3, of the 1969 Vienna Convention). Very few commentators expressly reject the principle. See, however, U. Linderfalk, *Om tolkningen av traktater,* Lund, Lunds Universitet, 2001, pp. 353–354 (viewing it as covered by some techniques but overridden by others).

[75] Statement by the Expert Consultant (Waldock), *Official Records of the United Nations Conference on the Law of Treaties, second session, Vienna, 9 April–22 May 1969, Summary records of the plenary meetings and of the meetings of the Committee of the Whole* (A/CONF.39/11/Add.1, United Nations publication, Sales No. E.68.V.7), 91st meeting of the Committee of the Whole, 16 April 1969, p. 253. See also P. Reuter, *Introduction au droit des traités*, 2nd rev. ed., Paris, Presses Universitaires de France, 1985, p. 112.

rules" and specifically point out that its scope of application is not limited to treaty law. Like many others, they stress its indicative role as a "discretionary aid" that is "expressive of common sense and of normal grammatical usage".[76] As such, it is often held to regulate the relationship between treaty (as *lex specialis*) and custom (as "general law").[77]

67. Uncertainties about the nature of legal interpretation are equally applicable to the role of *lex specialis*. As O'Connell has put it: "Writers have divided into those who believe it is possible to formulate definite rules for interpretation and those who believe that this is a delusion."[78] This is probably why a number of manuals do not mention the principle at all. If one thinks that legal interpretation is rather an "art than a science", then, of course, there seems little point in tying it down to technical rules or maxims.[79] Nevertheless, dismissing the principle may follow from an excessive expectation of the normative power of interpretative guidelines. The merits that lead interpreters to prefer special law to general law, outlined by Grotius above, provide a reason to include it among the pragmatic considerations that lawyers should take account. With good reason, Schwarzenberger sees this whole branch of the law—namely interpretation—as an aspect of what he calls *jus aequum, i.e.* the rule that "enjoins the parties to interpret and apply each treaty in a spirit of reasonableness and good faith".[80] As an interpretative guideline, *lex specialis* does articulate important concerns: the need to ensure the practical relevance and effectiveness of the standard, as well as to preserve what is often a useful guide to party intentions. These concerns need, of course, to be balanced against countervailing ones: the hierarchical position of the relevant standard and other evidence of State intent. But, however the "balance" is conceived, all of this takes place within an argumentative practice that seeks to justify its outcomes less in terms of technical application than as contributions to a purposive system of law.

(b) *Case law*

68. International case law also appears to accept the *lex specialis* maxim, although again normally without great elaboration. Four different situations may be distinguished. The maxim may operate: (*a*) within a single instrument; (*b*) between two different instruments; (*c*) between a treaty and a non-treaty standard; and (*d*) between two non-treaty standards.

69. The *Beagle Channel arbitration* had to do with the relationship between articles II and III of a Boundary Treaty of 1881, both of which dealt with the drawing of borders. According to the arbitral tribunal, article II did not specify in detail the delimitation of *Tierra del Fuego* or of certain disputed islands. Instead, this was left to article III. While the two articles dealt with the same territories, they did not duplicate each other or create anomalies or redundancy:[81]

> all conflicts or anomalies can be disposed of by applying the rule *generalia specialibus non derogant*, on which basis Article II (*generalia*) would give way to Article III (*specialia*), the latter prevailing; …[82]

70. This is the standard case where *lex specialis* appears within one and the same instrument, regulating the relationship between two of its provisions.[83] The rationale for its use may be derived either from the principle of "normal meaning" in article 31, paragraph 1, of the 1969 Vienna Convention or from the need to respect the intention of the parties.

71. The European Court of Human Rights has frequently applied *lex specialis* in articulating the nature of the relationship between provisions of the European Convention on Human Rights. The Court has, for instance, considered the relationship between article 13, which provides a right of "effective remedy before a national authority", and article 5, paragraph 4, which stipulates that anyone deprived of liberty shall "be entitled to take proceedings by which the lawfulness of his detention shall be decided speedily by a court and his release ordered if the detention is not lawful". It has seemed to follow that:

> Since the requirements of Article 13 … are less strict than those of Article 5 para. 4 …, [the latter] must be regarded as the *lex specialis* in respect of complaints under Article 5…[84]

72. Likewise, the European Court of Human Rights has considered article 6 of the Convention, providing the right to a fair trial, as *lex specialis* in relation to the provision

[76] Jennings and Watts (eds.), *Oppenheim's International Law* (footnote 37 above), pp. 1270, 1280.

[77] See, for example, M. E. Villiger, *Customary International Law and Treaties: A Study of their Interactions and Interrelations with Special Consideration of the 1969 Vienna Convention on the Law of Treaties*, Dordrecht, Martinus Nijhoff, 1985, p. 161.

[78] D. P. O'Connell, *International Law*, 2nd ed., vol. I, London, Stevens and Sons, 1970, p. 253.

[79] See M. Koskenniemi, *From Apology to Utopia: The Structure of International Legal Argument* (reissue with a new epilogue), Cambridge, Cambridge University Press, 2005, pp. 338–339.

[80] G. Schwarzenberger, *International Law*, vol. I, 3rd ed., *International Law as Applied by International Courts and Tribunals: I*, London, Stevens and Sons, 1957, pp. 474, 477 *et seq.* See also Pauwelyn, *Conflict of Norms…* (footnote 21 above), p. 388.

[81] *Dispute between Argentina and Chile concerning the Beagle Channel*, 18 February 1977, UNRIAA, vol. XXI (Sales No. E/F.95.V.2), p. 53, at pp. 99–100, paras. 36, 38; ILR, vol. 52, p. 93, at p. 143. For the Boundary Treaty between the Argentine Republic and the Republic of Chile, signed at Buenos Aires on 23 July 1881, see United Nations, *Treaty Series*, vol. 2384, No. 1295, p. 205.

[82] *Dispute between Argentina and Chile concerning the Beagle Channel*, UNRIAA, vol. XXI (Sales No. E/F.95.V.2), p. 100, para. 39; ILR, vol. 52, p. 144.

[83] See also the discussion by the European Court of Justice of the relationship between article 5, paragraph 1, and article 13 of the Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters, 1968. As the former provision related to "contractual matters in general" and the latter "specifically cover[ed] various types of contracts concluded by consumers", the latter constituted *lex specialis* in regard to the former, and it was sufficient to apply that provision, if it was applicable. In that case it became "unnecessary to examine whether [the claim] is covered by Article 5 (1)" (European Court of Justice, case No. C-96/00, *Rudolf Gabriel*, judgment of 11 July 2002, *European Court Reports 2002*, p. 6367, at pp. 6398–6399, paras. 35–36, and p. 6404, para. 59).

[84] *Brannigan and McBride v. the United Kingdom*, 26 May 1993, European Court of Human Rights, Series A, No. 258-B, p. 57, para. 76. See also *De Jong, Baljet and Van den Brink v. the Netherlands*, 22 May 1984, European Court of Human Rights, Series A, No. 77, p. 27, para. 60; *Murray v. the United Kingdom*, 28 October 1994, European Court of Human Rights, Series A, No. 300-A, p. 37, para. 98; and *Nikolova v. Bulgaria* [GC], No. 31611/96, ECHR 1999-II, p. 225, para. 69.

for "effective remedy" in article 13.[85] It has also held that article 11, granting freedom of assembly and association, may take precedence as *lex specialis* over the freedom of expression provided for in article 10.[86]

73. These articles are not necessarily always in strict conflict, and it might be possible to apply them concurrently. In fact, article 5, paragraph 4, may also be seen as an *application* of article 13 in a particular case. This is also true when two provisions are closely connected, as is the case of freedom of expression and freedom of assembly. Sometimes freedom of assembly may appear as *lex specialis* in relation to freedom of expression. But the relationship may also be reversed. There is no reason why article 10, providing freedom of expression, may not be seen as *lex specialis* in relation to article 11, granting freedom of peaceful assembly.

74. A second case is where *lex specialis* regulates the relationship between *different* instruments. In the *Mavrommatis Palestine Concessions* case, the Permanent Court of International Justice was faced with two instruments that had a bearing on its jurisdiction: the 1922 Mandate for Palestine and Protocol XII to the Treaty of Lausanne of 1923. The Court concluded that "in cases of doubt, the Protocol, being a special and more recent agreement, should prevail".[87] That view seemed to endorse both the *lex posterior* and the *lex specialis* maxims without entering into the question of their relationship.

75. This matter has been treated in a general way within WTO, where panels and the Appellate Body have occasionally resorted to *lex specialis* in the interpretation of the treaties it covers.[88] In the *Turkey—Restrictions on Imports of Textile and Clothing Products case,* the Panel emphasized that the Marrakesh Agreement establishing the World Trade Organization is a "Single Undertaking" and that the obligations of members are cumulative. Thus, a special provision may only prevail over another provision if it is impossible to apply the two provisions simultaneously.[89] In *Indonesia—Certain Measures Affecting the Automobile Industry,* the Panel similarly explained that there is a presumption against conflicts and that, for a conflict to exist, it must be between the same parties and deal with the same subject matter and the provisions must be mutually exclusive.[90] In WTO, *lex specialis* appears to have a limited role as a subsidiary means of resolving conflicts.[91]

76. When *lex specialis* is applied in a particular institutional context (within a "regime", in the language of chapter III below), then of course it is affected by the relevant (though not necessarily formal) institutional hierarchy. In 2000, the Court of First Instance of the European Union was called upon to determine the relationship between a regulation from 1981 that treated information obtained in customs investigations as confidential and a European Commission decision of 1994 that provided public access to Commission documents. The Court observed that the regulation,

> as far as it is to be applied as a *lex specialis*, cannot be interpreted in a sense contrary to [the decision], whose fundamental objective is to give citizens the opportunity to monitor more effectively the lawfulness of the exercise of public powers…[92]

77. The normative hierarchy between the earlier Council regulation and the later Commission decision, incorporating a Code of Conduct concerning public access to Commission and Council documents, may not have been quite clear. Nonetheless, in this case, the Court interpreted a prior *lex specialis,* which, if anything, was at least not of inferior status to the subsequent Commission decision, so as to be in conformity with the latter.[93] It is not difficult to understand why, in 1999, considerations of transparency might override a regulation from 1981. But this relationship was the "automatic" result neither of a formal hierarchy nor of *lex specialis* as a conflict resolution rule.

78. A third case is where *lex specialis* is resorted to in order to privilege a treaty standard over a non-treaty standard. In *INA Corporation v. The Government of the*

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[85] *Yankov v. Bulgaria*, No. 39084/97, ECHR 2003-XII (extracts), para. 150. See also *Brualla Gómez de la Torre v. Spain*, 19 December 1997, European Court of Human Rights, *Reports of Judgments and Decisions* 1997-VIII, p. 2957, para. 41; *Vasilescu v. Romania*, 22 May 1998, European Court of Human Rights, *Reports of Judgments and Decisions* 1998-III, p. 1076, para. 43. Cf. *Kudła v. Poland* [GC], No. 30210/96, ECHR 2000-XI, pp. 234–236, paras. 146–148.

[86] *Ezelin v. France*, 26 April 1991, European Court of Human Rights, Series A, No. 202, p. 20, para. 35, and *Djavit An v. Turkey*, No. 20652/92, ECHR 2003-III, p. 251, para. 39.

[87] *Mavrommatis Palestine Concessions*, Judgment, 30 August 1924, *P.C.I.J., Series A*, No. 2, p. 31.

[88] These interpretations have taken place both between provisions in single instruments and between provisions in two different "covered treaties". There appear to have been no cases of reference to *lex specialis* between a WTO treaty and a non-WTO treaty. See *Brazil—Export Financing Programme for Aircraft*, WTO Panel report, WT/DS46/R, adopted 20 August 1999, para. 7.40, as modified by Appellate Body report WT/DS46/AB/R; *Turkey—Restrictions on Imports of Textile and Clothing Products*, WTO Panel report, WTO/DS34/R, adopted 19 November 1999, para. 9.92, as modified by Appellate Body report WT/DS34/AB/R; and *Indonesia—Certain Measures Affecting the Automobile Industry*, WTO Panel report, WT/DS54/R, WT/DS55/R, WT/DS59/R, WT/DS64/R, Corr.1 and Corr.2, adopted 23 July 1998, and Corr.3 and Corr.4, paras. 14.28–14.34.

[89] *Turkey—Restrictions on Imports of Textile and Clothing Products* (see footnote 88 above), para. 9.92.

[90] *Indonesia—Certain Measures Affecting the Automobile Industry* (see footnote 88 above), para. 14.28.

[91] *India—Quantitative Restrictions on Imports of Agricultural, Textile and Industrial Products*, WTO Panel report, WT/DS90/R, adopted 22 September 1999, para. 4.20, upheld by Appellate Body report WT/DS90/AB/R.

[92] *JT's Corporation Ltd. v. Commission of the European Communities*, Court of First Instance, judgment of 12 October 2000, European Court of Justice, case T-123/99, *European Court Reports 2000*, p. 3269, at p. 3292, para. 50.

[93] A similar type of argument was employed in a recent case that dealt with the relationship between two directives, one dealing with waste (Council Directive 75/442/EEC of 15 July 1975, *Official Journal of the European Communities*, L 194, vol. 18, 25 July 1975, p. 39) and the other, much more recent, with packaging and packaging waste (European Parliament and Council Directive 94/62/EC of 20 December 1994, *ibid.*, L 365, vol. 37, 31 December 1994, p. 10). The provisions of the latter were identified by the European Court of Justice as *lex specialis vis-à-vis* the former "so that its provisions prevail over" those of that earlier directive "in situations which it specifically seeks to regulate". No full setting aside was involved, however: "Nevertheless", the judgment reads, "Directive 75/442 remains very important for the interpretation and application of Directive 94/62" (European Court of Justice, case C-444/00, *The Queen, on the application of Mayer Parry Recycling Ltd., v. Environment Agency and Secretary of State for the Environment, Transport and the Regions, and Corus (UK) Ltd. and Allied Steel and Wire Ltd. (ASW)*, judgment of 19 June 2003, *European Court Reports 2003*, p. 6163, at pp. 6228–6229, paras. 53 and 57).

Islamic Republic of Iran, the corporation sought compensation for the expropriation of its 20-per-cent share in an Iranian insurance company. The claimant argued that, on the basis of international law and the Iran–United States Treaty of Amity of 1955, compensation should be "prompt, adequate and effective". The respondent held that compensation was to be calculated on the basis of the net book value of the nationalized shares. The Tribunal considered that in cases of large-scale lawful nationalizations general international law no longer provided for full compensation. It did not, however, attempt to establish the exact content of the customary norm, as it considered that, for the purposes of the case,

> we are in the presence of a *lex specialis,* in the form of the Treaty of Amity, which in principle prevails over general rules.[94]

79. That treaty rules enjoy priority over custom is merely incidental to the fact that most general international law is *jus dispositivum,* so that parties are entitled to derogate from it by establishing specific rights or obligations to govern their behaviour. As the International Court of Justice has pointed out, "it is well understood that, in practice, rules of [general] international law can, by agreement, be derogated from in particular cases, or as between particular parties".[95] This approach, together with the practical priority of treaty over custom, was also affirmed by the Court in *Military and Paramilitary Activities in and against Nicaragua*:

> In general, treaty rules being *lex specialis*, it would not be appropriate that a State should bring a claim based on a customary-law rule if it has by treaty already provided means for settlement of a such a claim.[96]

80. In the *Continental Shelf (Tunisia/Libyan Arab Jamahiriya)* case, the Court suggested that States might be able to opt out from the development of general law by this means. It had been authorized by the Special Agreement to take into account the "new accepted trends" at the Third United Nations Conference on the Law of the Sea. In this regard, the Court noted that

> [i]t would no doubt have been possible for the Parties to have identified in the Special Agreement certain specific developments in the law of the sea … , and to have declared that in their bilateral relations in the particular case such rules should be binding as *lex specialis*.[97]

81. In these cases, the Court accepted that general international law may be subject to derogation by agreement and that such agreement may be rationalized as *lex specialis*. These cases illustrate the practice of international tribunals to give precedence to treaty law in matters where there is customary law as well—a practice that highlights the dispositive nature of custom and the tribunals' deference to agreements as the "hardest" and presumably most legitimate basis on which their decisions can be based. Thirlway summarizes the jurisprudence as follows:

> It is universally accepted that—consideration of *jus cogens* apart—a treaty as *lex specialis* is law between the parties to it in derogation of the general customary law which would otherwise have governed their relations.[98]

82. None of this means that the general customary law would thereby become extinguished. It will continue to apply in the background and become fully applicable when, for instance, the treaty is no longer in force or, as in the *Military and Paramilitary Activities in and against Nicaragua* case, if the jurisdiction of the relevant law-applying organ fails to cover the treaty.[99]

83. An atypical use of *lex specialis* may be found in a case from 1981, in which the Iran–United States Claims Tribunal concluded that "it is a well recognised and universal principle of interpretation that a special provision overrides a general provision". The Tribunal here invoked *lex specialis* so as to argue that "the terms of the Claims Settlement Declaration are so detailed and so clear that they must necessarily prevail over the purported intentions of the parties, whatever they could have been".[100] As such, the principle seems to have coalesced with the rule in favour of the "ordinary" meaning under article 31, paragraph 1, of the 1969 Vienna Convention.

84. A fourth case is where the same reasoning—though not necessarily the expression *lex specialis*—is applied to two non-treaty standards. This was so in the *Right of Passage over Indian Territory* case. After having determined that the practice accepted by the States concerned (India and Great Britain/Portugal) established a right of transit over Indian territory, the International Court of Justice no longer felt it necessary to investigate what the content of general law on transit passage may have been, for it was evident to the Court that in any case "[s]uch a particular practice must prevail over any general rules".[101] Though express practice is not abundant, it is hard to see why *lex specialis*—or at least the reasoning behind it—would not be applicable to the relationship between general and special custom. What is interesting in *Right of Passage over Indian Territory* is the Court's use of what Thirlway calls the "perfectly recognized and respectable judicial technique" of setting aside any examination of the content of the general law, once the special custom had been

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[94] *INA Corporation v. The Government of the Islamic Republic of Iran*, Iran–United States Claims Tribunal, case No. 161, 12 August 1985, 8 IRAN–U.S. C.T.R., p. 373, at pp. 376, 378. For the Treaty of Amity, Economic Relations, and Consular Rights between the United States of America and Iran, signed at Tehran on 15 August 1955, see United Nations, *Treaty Series*, vol. 284, No. 4132, p. 93.

[95] *North Sea Continental Shelf*, Judgment, *I.C.J. Reports 1969*, p. 3, at p. 42, para. 72. See also, however, pp. 38–40, paras. 61–65, and, in particular, para. 63 ("general or customary law rules and obligations … , by their very nature, must have equal force for all members of the international community").

[96] *Military and Paramilitary Activities in and against Nicaragua*, Merits, Judgment of 27 June 1986 (see footnote 51 above), p. 137, para. 274.

[97] *Continental Shelf (Tunisia/Libyan Arab Jamahiriya), Judgment, I.C.J. Reports 1982*, p. 18, at p. 38, para. 24. For the Special Agreement for the submission to the International Court of Justice of the question of the continental shelf between Tunisia and the Libyan Arab Jamahiriya, signed at Tunis on 10 June 1977, see United Nations, *Treaty Series*, vol. 1120, No. 17408, p. 103.

[98] H. Thirlway, "The law and procedure of the International Court of Justice 1960–1989 (Part One)", *British Year Book of International Law 1989*, vol. 60, p. 147. Similarly, for example, A. Verdross and B. Simma, *Universelles Völkerrecht: Theorie und Praxis*, 3rd ed., Berlin, Duncker and Humblot, 1984, pp. 414–415.

[99] *Military and Paramilitary Activities in and against Nicaragua*, Merits, Judgment of 27 June 1986 (see footnote 51 above), p. 96, para. 179.

[100] Iran–United States Claims Tribunal, case No. A/2, 13 January 1982, 1 IRAN–U.S. C.T.R., p. 101, at p. 104.

[101] *Case concerning Right of Passage over Indian Territory*, Merits, Judgment of 12 April 1960, *I.C.J. Reports 1960*, p. 6, at p. 44.

found, in a way that leaves open the questions of whether the special rule was an elaboration of or an exception to that general law or whether there was any general law in the matter in the first place.[102]

(c) *An informal hierarchy: the point of* lex specialis

85. There is no formal hierarchy among the sources of international law. A number of writers have—correctly, it is submitted—nonetheless suggested that there is a kind of informal hierarchy among them. Inasmuch as "general law" does not have the status of *jus cogens*, treaties generally enjoy priority over custom and particular treaties over general treaties.[103] In the same vein, it may be assumed (as is indeed suggested by the *Right of Passage over Indian Territory* case) that local customs (if proven) have primacy over general customary law and, perhaps, that the body of customary law has primacy over the general principles of law under Article 38, paragraph 1 (*c*), of the Statute of the International Court of Justice.[104] This informal hierarchy follows not from any legislative enactment, but emerges rather as a "forensic"[105] or "natural"[106] aspect of legal reasoning. Any court or lawyer will first look at treaties, then custom, and then the general principles of law for an answer to a normative problem. "Empirically," Serge Sur writes, "the Court has given precedence to rules that have the highest degree of specialty, and the clearest and most objective manifestation."[107] The secondary source is not extinguished thereby but plays a "residual part" in directing the interpretation of the special law and becoming applicable in its stead where the special law cannot, for one reason or another, be applied.[108]

86. Such informal hierarchy is an aspect of the pragmatics of legal reasoning that differentiates between "easy" and "hard" cases. As the special law's speciality reflects its relevance to the context and its status as evidence of party will, its application often seems self-evident. In an "easy" case, the speciality of the standard or instrument does not even emerge as an object of argument. The need to look "behind" or "around" the *prima facie* standard or instrument arises only in "hard" cases, when its application is contested and another standard or instrument is invoked in its stead. Only then does the *lex specialis* maxim become expressly relevant, but even then it does so only in relation to countervailing constructions about how the context should be understood (*e.g.* is the case one of "integral" or "interdependent" obligation?) or deviating evidence of party intention (*e.g. lex posterior*) or hierarchy (*e.g. jus cogens*).

87. When a "hard" case does emerge, it is the role of *lex specialis* to point to a set of considerations with practical relevance: the immediate accessibility and contextual sensitivity of the standard. Now, these may not be decisive considerations. They may be outweighed by countervailing ones. Reasoning about such considerations, though impossible to condense in determining rules or techniques, should not, however, be understood as arbitrary.[109] The reasoning may be the object of criticism, and whether it prevails will depend on how it succeeds in condensing what may be called, for instance, the "genuine shared expectations of the parties, within the limits established by overriding community objectives",[110] as reflected and tested against the various sources mentioned in Article 38, paragraph 1, of the Statute of the International Court of Justice, legal precedent and doctrine. In such debates, all parties assume that the justifiability of what they say depends on how it links to such larger views about the purposes of the international legal system.

2. The two types of *lex specialis* reference

88. There are two ways in which law may take account of the relationship of a particular rule to a general one. A particular rule may be considered an *application* of a general standard in a given circumstance. The special relates to the general as administrative regulation does to law in the domestic legal order.[111] Alternatively, it may be considered as a *modification*, an *overruling* or a *setting aside* of the latter.[112] The first case is sometimes not seen as a situation of normative conflict at all, but is taken to involve the *simultaneous* application of the special and the general standard.[113] Thus, only the latter is thought to involve the application of a genuine *lex specialis*. This

[102] H. Thirlway, "The law and procedure of the International Court of Justice 1960–1989 (Part Two)", *British Year Book of International Law 1990*, vol. 61, p. 1, at pp. 104–106.

[103] Verdross and Simma, *Universelles Völkerrecht…* (see footnote 98 above), pp. 413–414; Thirlway, "The law and procedure of the International Court of Justice 1960–1989 (Part One)" (see footnote 98 above), pp. 143–144.

[104] In French doctrine, this result is sometimes achieved by distinguishing between *acte* and *norme*, or a formal source and the (substantive) rule encompassed by it, so that, while there may be no hierarchy between the former, there must be rules for resolving overlaps and conflicts between the latter. See, for example, Daillier and Pellet, *Droit international public* (footnote 74 above), pp. 114–116; G Abi-Saab, "Cours général de droit international public", *Recueil des cours de l'Académie de droit international de La Haye, 1987-VII*, vol. 207, p. 188.

[105] Jennings and Watts, *Oppenheim's International Law* (see footnote 37 above), p. 26, footnote 2.

[106] Villiger (see footnote 77 above), p. 161. Likewise, H. Lauterpacht, *International Law: Collected Papers of Sir Hersch Lauterpacht*, vol. I, *The General Works*, E. Lauterpacht (ed.), Cambridge, Cambridge University Press, 1970, pp. 86–88.

[107] S. Sur, *L'interprétation en droit international public*, Paris, LGDJ, 1974, p. 164. Czapliński and Danilenko speak of "priority of application": Czapliński & Danilenko (see footnote 74 above), p. 8.

[108] See, for example, the discussion by Rousseau of the *Polish Postal Service in Danzig* case (*Advisory Opinion,* 16 May 1925, *P.C.I.J., Series B*, No. 11), in which the Treaty of Versailles was to be complemented by bilateral talks between Danzig and Poland, as well as the discussion of *Jurisdiction of the European Commission of the Danube between Galatz and Braila* (*Advisory Opinion*, 8 December 1927, *P.C.I.J., Series B*, No. 14), p. 177: Rousseau, "De la compatibilité des normes juridiques contradictoires…" (footnote 36 above), pp. 177–178.

[109] *Pace* strict positivists such as Kelsen. See H. Kelsen, *Introduction to the Problems of Legal Theory* (trad. B. L. Paulson and S. L. Paulson, introduction by S. L. Paulson), Oxford, Clarendon Press, 1992 [1934], pp. 81–84.

[110] McDougal, Lasswell & Miller (see footnote 74 above), pp. 82–83.

[111] This is how Scelle describes the functioning of *lex specialis* in international law: Scelle (see footnote 70 above), p. 642.

[112] Jenks distinguishes between "conflict" and "divergence": Jenks (see footnote 8 above), pp. 425–427. Likewise, Pauwelyn, *Conflict of Norms…* (see footnote 21 above), p. 6.

[113] This appears to be the way Pauwelyn treats the matter. While he accepts that it may not be easy to appreciate whether a case belongs to one or the other of the two categories, he holds to the analytical distinction and deals with the *lex specialis* only "as a rule to resolve conflict in the applicable law" (Pauwelyn, *Conflict of Norms…* (see footnote 21 above), p. 386).

seems to be the position within the WTO Dispute Settlement Body. While there appears to be a strong emphasis on interpreting WTO obligations so that there would be no conflict between them, the *lex specialis* principle is assumed to apply if "harmonious interpretation" turns out to be impossible, that is, a general standard is overridden by a conflicting special one.[114]

89. Something like this may have been the assumption within the Commission during the drafting of article 55 of the draft articles on responsibility of States for internationally wrongful acts. In its commentary, the Commission explained that:

> For the *lex specialis* principle to apply it is not enough that the same subject matter is dealt with by two provisions; there must be some actual inconsistency between them, or else a discernible intention that one provision is to exclude the other.[115]

90. The Commission supported its view by reference to the *Neumeister* case from the European Court of Human Rights. In that case, the Court had observed that the provision on compensation in the event of unlawful arrest set out in article 5, paragraph 5, of the European Convention on Human Rights was not *lex specialis* in relation to the general rule on compensation in article 50. The former did not set aside the latter. Instead, the two provisions worked concurrently. The latter was to be "taken into account" when applying the former.[116] More recently, however, the Court has frequently characterized similar cases as *lex specialis*. Thus, the cases referred to in paragraph 71 above—juxtaposing the "effective remedy" rule of article 13 of the Convention with the right to have one's detention speedily dealt with by a court under article 5, paragraph 4—have been dealt with by reference to *lex specialis*:

> According to the Court's established case-law Article 5 § 4 of the Convention constitutes a *lex specialis* in relation to the more general requirements of Article 13. In the present case the facts underlying the applicant's complaint under Article 13 of the Convention are the same as those examined under Article 5 § 4. Accordingly, the Court need not examine the allegation of a violation of Article 13 in view of its finding of a violation of Article 5 § 4.[117]

91. In these as well as in many other cases, the European Court of Human Rights has thought the *lex specialis* applicable even in the absence of direct conflict between two provisions and where it might be said that both apply concurrently.[118] This is the proper approach. There are two reasons why it is useful to consider the case of "application" in connection with the case where *lex specialis* sets up an exception or involves a "setting-aside". First, it follows from the definition of *lex specialis* adopted above that this case is also included: the norm of application is more specific because it contains the general rule itself as one element in the definition of its scope of application. Second, and more important, though the distinction is analytically sound, it is in practice seldom clear-cut. It may often be difficult to say whether a rule "applies" a standard, "modifies" it or "derogates from" it. An "application" or "modification" also involves a degree of "derogation" and "setting aside". To decide which expression is appropriate requires an interpretation of both rules, and such interpretation, as follows from articles 31 and 32 of the 1969 Vienna Convention, may also reach beyond a scrutiny of the expressions used in those rules. This ambivalence was evident in the *Gabčíkovo-Nagymaros Project* case. Here the International Court of Justice referred to *lex specialis* in the following way:

> It is of cardinal importance that the Court has found that the 1977 Treaty is still in force and consequently governs the relationship between the Parties. That relationship is also determined by the rules of other relevant conventions to which the two States are party, by the rules of general international law and, in this particular case, by the rules of State responsibility; but it is governed, above all, by the applicable rules of the 1977 Treaty as a *lex specialis*.[119]

92. In this case, the Court left open what the relationship between the *lex specialis*—the 1977 Treaty—and the rest of the law might have been. Whether or not that general law might have provided for a similar or a different directive was immaterial. It sufficed to apply the treaty. In the language adopted here: the informally superior position of the 1977 Treaty led to its *setting aside* every other treaty and the general law without there ever having been a determination of any "conflict". In this as well as in innumerable other cases there is no need (indeed, no possibility) to decide whether the *lex specialis* is used as an "interpretative maxim" or a "conflict resolution technique", whether it merely "applies" some more general standard or derogates from it.[120] Indeed, even to ask this question may be beside the point. In accordance with the informal hierarchy discussed above, the relevant special law applies, and that is all—unless another party raises the question of *jus cogens* or a prior obligation that might enjoy precedence, for example under articles 30 or 41 of the 1969 Vienna Convention.

93. Sometimes a *lex specialis* relationship has been identified between two norms that, far from being in conflict with each other, point in the same direction, while the relationship "special"/"general" is associated with that of "means"/"ends". As noted above, the European Court of Human Rights has characterized the relationship between article 10 of the European Convention on Human Rights, on freedom of expression, and article 11, dealing with freedom of assembly and movement, by conceiving the latter as *lex specialis* in relation to the former:

> The Court notes that the issue of freedom of expression cannot in the present case be separated from that of freedom of assembly. The protection of personal opinions, secured by Article 10 of the Convention,

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[114] *Turkey—Restrictions on Imports of Textile and Clothing Products* (see footnote 88 above), paras. 9.92–9.96. On the presumption against conflict in WTO law generally, see Pauwelyn, *Conflict of Norms…* (footnote 21 above), pp. 240–244.

[115] Para. (4) of the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 140.

[116] *Neumeister v. Austria (art. 50)*, judgment of 7 May 1974, European Court of Human Rights, Series A, No. 17, p. 13, para. 30.

[117] *Nikolova v. Bulgaria* [GC] (see footnote 84 above), p. 225, para. 69.

[118] See also, in this regard, H. Aufricht, "Supersession of treaties in international law", *Cornell Law Review,* vol. 37, No. 2 (winter 1952), p. 698 (special law being "supplementary" while the general law remains "controlling").

[119] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 7, at p. 76, para. 132. For the Treaty concerning the Construction and Operation of the Gabčíkovo–Nagymaros System of Locks, signed at Budapest on 16 September 1977, see United Nations, *Treaty Series*, vol. 1109, No. 17134, p. 211.

[120] For discussion, see Jenks (footnote 8 above), pp. 408–420.

is one of the objectives of freedom of peaceful assembly as enshrined in Article 11 of the Convention … Thus, observing that the applicant's grievances relate mainly to alleged refusals of the "TRNC" authorities to grant him permits to cross over the "green line" and meet with Greek Cypriots, the Court considers that Article 11 of the Convention takes precedence as the *lex specialis* for assemblies, so that it is unnecessary to examine the issue under Article 10 separately. The Court will, however, have regard to Article 10 when examining and interpreting Article 11.[121]

94. Not only is there no "conflict" between articles 10 and 11, but both point in the same direction: their relationship is one of means/ends. Yet why would "expression" be the purpose of "assemblies"; might not meaningful "assemblies" (as an expression of democracy and self-government, for example) sometimes be understood rather as the purpose towards which a right of expression is only a means? The relationship between general and particular may often be complex and two-sided, so that, even as the particular sets aside the general, the latter—as the Court has noted—will continue to provide interpretative direction to the former.

95. This example shows that fixing a definite relationship between two standards, one of which should be seen either as an application of or an exception to the other, may often be quite impossible. It might, for example, be said that the "inherent right of self-defence" in Article 51 of the Charter of the United Nations is *lex specialis* in relation to the principle of non-use of force in Article 2, paragraph 4. The two rules have a very similar (though not identical) scope of application (they apply to inter-State use of armed force). Because Article 51 is more specific than Article 2, paragraph 4, it is applicable when its conditions are fulfilled. In this sense, Article 51 may sometimes "replace" or "set aside" the prohibition in Article 2, paragraph 4. But Article 51 may also be seen as an "application" of Article 2, paragraph 4, inasmuch as self-defence covers action against a State that has *violated* Article 2, paragraph 4. In this case, Article 51 strengthens and supports Article 2, paragraph 4, and provides instructions on what to do in some cases (those involving "armed attack") in the event of a breach of Article 2, paragraph 4. Both rules are now rationalized under the same purpose—the protection of the territorial integrity and political independence of States—of which they appear as particular applications. Article 51 now appears not so much an exception as a supplement to Article 2, paragraph 4.

96. And what to say of the place of *lex specialis* in the *Legality of the Threat or Use of Nuclear Weapons* case (1996)? Here the International Court of Justice observed that both human rights law (specifically the International Covenant on Civil and Political Rights) and the laws of armed conflict applied "in times of war". Nevertheless, when it came to determining what constituted an "arbitrary deprivation of life" under article 6, paragraph 1 of the Covenant, this fell "to be determined by the applicable *lex specialis*, namely, the law applicable in armed conflict".[122] In this respect, the two fields of law applied concurrently, or within each other. From another perspective, however, the law of armed conflict—and in particular its more relaxed standard of killing—set aside whatever standard might have been provided under the practice of the Covenant.

97. It follows that whether a rule is seen as an "application" of, "modification" of or "exception" to another rule depends on how we view those rules in the environment in which they are applied, including what we see as their object and purpose. Because separating "application" from "setting aside" would be artificial and would distort the context in which the question of *lex specialis* emerges, it is proposed to include all of these questions in the *lex specialis* study.

(a) Lex specialis *as an application or elaboration of* lex generalis

98. A rule may thus be *lex specialis* in regard to another rule as an application, updating or development thereof, or, which amounts to the same, as a supplement to it, providing instructions on what a general rule requires in some particular case. A regional instrument may thus be *lex specialis* in regard to a universal one, and an agreement on technical implementation *lex specialis* in regard to a general "framework" instrument.[123] Despite the way the particular rule now "applies" the general rule, it also sets aside the latter in a way that is not devoid of normative consequences.

99. For example, many provisions in the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer are special law in relation to the 1985 Vienna Convention for the Protection of the Ozone Layer.[124] When States apply the emission reduction schedule in article 2 of the Protocol, they give concrete meaning to the general principles in the Convention. Though it may be said that in this case they apply *both* the Protocol *and* the Convention, there is a sense in which the Protocol has now set aside the Convention. In the event of a dispute as to what the relevant obligations are, the starting point and focus of interpretation will now be the wording of the Protocol, and no longer of the Convention. The special rule in the Protocol has become an independent

[121] *Djavit An v. Turkey* (see footnote 86 above), p. 251, para. 39.

[122] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, *I.C.J. Reports 1996*, p. 226, at p. 240, para. 25.

[123] Examples of such relationships are included in Jenks (see footnote 8 above), pp. 408–420, and Sadat-Akhavi (see footnote 21 above), pp. 189–191 *passim*. See also the award of the Arbitral Tribunal in the *Southern Bluefin Tuna* case, where the Tribunal noted the frequent parallelism between treaties and that "the conclusion of an implementing convention does not necessarily vacate the obligations imposed by the framework convention upon parties to the implementing convention" (*Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan* (see footnote 26 above), p. 40, para. 52). The Tribunal did not state whether this was a special application of the *lex specialis* or a setting aside of the *lex specialis* because Japan had argued that it fully replaced the obligations of the framework convention by those of the implementing convention.

[124] Vienna Convention for the Protection of the Ozone Layer, 22 March 1985; Montreal Protocol on Substances that Deplete the Ozone Layer, 16 September 1987; Adjustments to the Montreal Protocol on Substances that Deplete the Ozone Layer, 29 June 1990, annex I to the report of the Second Meeting of the Parties (UNEP/OzL.Pro.2/3) and depositary notification C.N.133.1991.TREATIES–3/2 of 27 August 1991 (rectification of the Spanish authentic text of the adjustments and amendment) (see also ILM, vol. 30, No. 2 (March 1991), p. 539); and Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, 29 June 1990, annex II to the report of the Second Meeting of the Parties (UNEP/OzL.Pro.2/3) and depositary notification C.N.133.1991.TREATIES–3/2 of 27 August 1991 (rectification of the Spanish authentic text of the adjustments and amendment) (see also ILM, vol. 30, No. 2 (March 1991), p. 541).

and authoritative representation of what the Convention *means* in terms of the obligations it provides. And yet, the Convention continues to express the principles and purposes that also affect the interpretation and application of the Protocol. In other words, in "easy" cases, the Protocol is applied without controversy about how this should be done, while in "hard" cases a dispute about the Protocol's interpretation and application arises and will need to be resolved by recourse to, *inter alia*, the standards of the Convention.

100. Similar thinking applies even if the special law is intended to replace the general law completely. As the Iran–United States Claims Tribunal stated in *Amoco International Finance Corporation v. Iran*:

> As a *lex specialis* in the relations between the two countries, the Treaty supersedes the *lex generalis*, namely customary international law. This does not mean, however, that the latter is irrelevant in the instant Case. On the contrary, the rules of customary law may be useful in order to fill in possible *lacunae* of the Treaty, to ascertain the meaning of undefined terms in its text or, more generally, to aid interpretation and implementation of its provisions.[125]

101. This is no different from the above-mentioned *Neumeister* case, where the European Court of Human Rights refused to hold article 5, paragraph 5, of the European Convention on Human Rights as *lex specialis* in regard to article 50 because of its *a priori* view that *lex specialis* must involve a conflict. The Court distinguished the two provisions by the fact that article 5, paragraph 5, was a rule of "substance", while article 50 dealt with the competence of the Court. The latter was nonetheless to be "taken into consideration" when applying the former.[126] Though the Court here refrained from invoking *lex specialis*, in its later jurisprudence it has done this.[127]

102. In both cases—that is, either as an application of or as a derogation from the general law—the point of the *lex specialis* rule is to indicate which rule should be applied. In both cases, the special, as it were, steps in to become applicable instead of the general. Such replacement, however, always remains only partial. The more general rule remains in the background, providing interpretative direction to the special one. Thus, in the recent *Oil Platforms* case,[128] the general law concerning the use of force was applied to give meaning to a wide standard of "necessity" in the relevant *lex specialis*, the 1955 Treaty of Amity between Iran and the United States. It was not that a particularly important *lex generalis* would have set aside *lex specialis,* but that the latter received its meaning from the former.[129]

(b) Lex specialis *as an exception to the general rule*

103. As pointed out above, most general international law is dispositive and can be derogated from by way of exception. But an "exception", too, works only in a relative sense, so that whatever is being "set aside" will continue to have an effect on the interpretation and application of the exception. It is often stated that the laws of war are *lex specialis* in relation to rules laying out the peace-time norms relating to the same subjects.[130] In *Legality of the Threat or Use of Nuclear Weapons*, the International Court of Justice discussed the relationship between the International Covenant on Civil and Political Rights and the laws applicable in armed conflict. Article 6, paragraph 1, of the Covenant establishes the right not to be deprived of one's life arbitrarily. This right, the Court pointed out, applies also in hostilities. However:

> The test of what is an arbitrary deprivation of life, however, then falls to be determined by the applicable *lex specialis*, namely, the law applicable in armed conflict which is designed to regulate the conduct of hostilities.[131]

104. The example of the laws of war focuses on a case where the rule itself identifies the conditions in which it is to apply, namely the presence of an "armed conflict". Owing to that condition, the rule appears more "special" than if no such condition had been identified. To regard this as a situation of *lex specialis* draws attention to an important aspect of the operation of the principle. Even as it works so as to justify recourse to an exception, what is being set aside does not vanish altogether.[132] The Court was careful to point out that human rights law *continued to apply* within armed conflict. The exception—humanitarian law—only affected one (albeit important) aspect of it, namely the relative assessment of "arbitrariness". Humanitarian law as *lex specialis* did not suggest that human rights were abolished in war. It did not function in a formal or absolute way but as an aspect of the pragmatics of

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[125] *Amoco International Finance Corporation v. The Government of the Islamic Republic of Iran* et al., Iran–United States Claims Tribunal, case No. 56, 14 July 1987, 15 IRAN–U.S. C.T.R., p. 189, at p. 222. For the Treaty of Amity, Economic Relations, and Consular Rights between the United States of America and Iran, see footnote 94 above.

[126] *Neumeister v. Austria (art. 50)* (see footnote 116 above), p. 13, para. 30.

[127] Somewhat parallel was the situation of the United Nations Tribunal in Libya, which, in 1955, faced a challenge to its jurisdiction under articles VII and X of its founding General Assembly resolution (388 (V) of 15 December 1950). It was stated by Libya that, as the question of confiscation had been dealt with under the former article and not in the latter, which provided for the Tribunal's jurisdiction, such jurisdiction did not cover it. Libya formulated this point as follows: "[I] t is a universal legal principle, when it comes to interpretation, that, in the event of a conflict between a general text and a special text, the latter shall prevail." The Tribunal rejected this objection, stating that article VII merely "specified" the fact that the Tribunal would have jurisdiction—which it exercised generally under article X—also in regard to confiscated properties. See *Décisions rendues les 3 juillet 1954 et 27 juin 1955 dans l'affaire relative aux institutions, sociétés et associations visées à l'article 5 de l'Accord conclu, en date du 28 juin 1951, entre les Gouvernements britannique et italien, concernant la disposition de certains biens italiens en Libye*, UNRIAA, vol. XII (Sales No. 63.V.3), p. 373, at p. 388. For the agreement between the United Kingdom and Italy, signed at London on 28 June 1951, see United Nations, *Treaty Series*, vol. 118, No. 1600, p. 115.

[128] *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, *I.C.J. Reports 2003*, p. 161.

[129] As suggested by E. Jouannet in "Le juge international face aux problèmes d'incohérence et d'instabilité du droit international. Quelques réflexions à propos de l'arrêt CIJ du 6 novembre 2003, Affaire des Plates-formes pétrolières", RGDIP, vol. 108 (2004), p. 917, at pp. 933, 936.

[130] For example, Jenks (see footnote 8 above), p. 446; W. Karl, "Treaties, conflicts between", in R. Bernhardt (ed.), *Encyclopedia of Public International Law*, vol. 4, Amsterdam, Elsevier, 2000, p. 937.

[131] *Legality of the Threat or Use of Nuclear Weapons* (see footnote 122 above), p. 240, para. 25.

[132] Though the marginal role left for human rights law in the Advisory Opinion is perceptively criticized in V. Gowlland-Debbas, "The right to life and genocide: the Court and an international public policy", in L. Boisson de Chazournes and P. Sands (eds.), *International Law, the International Court of Justice and Nuclear Weapons,* Cambridge, Cambridge University Press, 1999, p. 315, at pp. 321–326.

the Court's reasoning. However desirable it might be to discard the difference between peace and armed conflict, the exception that war continues to be to the normality of peace could not be simply overlooked when determining what standards should be used to judge behaviour in those (exceptional) circumstances. *Legality of the Threat or Use of Nuclear Weapons* was a "hard case" to the extent that a choice had to be made by the Court between different sets of rules, none of which could fully extinguish the others. *Lex specialis* hardly did more than to indicate that, while it might have been desirable to apply only human rights, such a solution would have been too idealistic, bearing in mind the speciality and persistence of armed conflict. So the Court created a systemic view of the law in which the two sets of rules related to each other as today's reality and tomorrow's promise, with a view to the overriding need to ensure the "survival of a State".[133]

105. The important point to retain here is that, when *lex specialis* is invoked as an exception to the general law, what is being suggested is that the special nature of the facts justifies a deviation from what otherwise would be the "normal" course of action. This highlights again the operation of *lex specialis* as an aspect of making pragmatic judgements about relative "generality" and "speciality", about what is "normal" and what "exceptional". Sometimes these distinctions are made in an instrument itself. Thus, article 4 of the International Covenant on Civil and Political Rights provides for a right to derogate from certain clauses in the Covenant "[i]n time of public emergency which threatens the life of the nation". When that factual condition is fulfilled, a situation emerges that is not unlike the "armed conflict" that justifies the application of laws of war, as referred to by the International Court of Justice in its *Legality of the Threat or Use of Nuclear Weapons* advisory opinion. And, as in the latter, in times of public emergency, either a modicum of legality will continue to apply or what takes its place is in fact a wholly unconstitutional legal vacuum.

106. Often the factual condition that makes a case "special" is not laid out in a treaty, however, but must be ascertained through the normal means by which the presence of a tacit agreement, estoppel, *effectivités*, historic title, *rebus sic stantibus*, or, say, local custom (*Right of Passage over Indian Territory* case) is identified. That assessment is dependent on and makes constant reference to evaluative judgements of what is central and what marginal to a case, what aspects of it should be singled out and what aspects may be glossed over. Do *effectivités* or "historical consolidation", for instance, give grounds for a kind of exception that is prior to formal "title", or *vice versa*? Sometimes (as in the *Sovereignty over Pulau Ligitan and Pulau Sipadan* case) *effectivités* may in fact ground title; sometimes a pre-existing title may turn any *effectivités* into an illegality (*Land and Maritime Boundary between Cameroon and Nigeria* case). No *a priori* solution seems available.[134]

107. Arguments based on *effectivités*, like those based on estoppel (*Temple of Preah Vihear*) and historical title (*Fisheries*), for example, resemble *lex specialis*.[135] They, too, seek to make the law responsive to particular situations. They, too, create informal hierarchies that seek to distinguish the special case from its general (and formal) background by pointing to a relevant fact. What they leave open, like the advisory opinion in *Legality of the Threat or Use of Nuclear Weapons*, is on what basis the relevant facts are singled out—what justifies the choice of the interpretative framework. To what extent does the factual description "armed conflict" influence the sense of the expression "arbitrary deprivation of life" in article 6 of the International Covenant on Civil and Political Rights? Here there is no single formula.[136] A weighing of different considerations must take place, and, if that weighing is to be something other than the expression of a preference, it must seek reference in what may be argued to be the systemic objectives of the law to provide its interpretative basis and *milieu*.

3. Prohibited *lex specialis*

108. Most general international law may be derogated from by *lex specialis*. But sometimes either a deviation is prohibited expressly or such a prohibition may be derived from the nature of the general law. The case of *jus cogens* will be dealt with in chapter IV below. In the recent dispute relating to the OSPAR Convention, for example, the Arbitral Tribunal held it self-evident that its task was to apply, alongside the OSPAR Convention itself, also international custom and general principles of law to the extent they were not overridden by the Convention as *lex specialis*, adding, however, that "[e]ven then, it must defer to a relevant *jus cogens* with which the Parties' *lex specialis* may be inconsistent".[137] But aside from *jus cogens*, there may be other types of general law that may not permit derogation. In regard to conflicts between human rights norms, for instance, the one that is more favourable to the protected interest is usually held to be overriding.[138] At any rate, derogation to the detriment of the beneficiaries would seem precluded.

109. Whether derogation by way of *lex specialis* is permitted will remain a matter of interpreting the general law. Concerns that may seem pertinent include at least the

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[133] *Legality of the Threat or Use of Nuclear Weapons* (see footnote 122 above), p. 266, para. 105 (2) E.

[134] See *Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia)*, Judgment, *I.C.J. Reports 2002*, p. 625, at p. 682, para. 134, and p. 684, para. 145 (*effectivités* as basis of Malaysia's title), and *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, *I.C.J. Reports 2002*, p. 303, at p. 415, para. 223 and pp. 341–344, paras. 52, 54–55 (*effectivités* illegal). See also *Frontier Dispute*, Judgment, *I.C.J. Reports 1986*, p. 554, at p. 564, para. 18 ("[i]n fact, the concept of title may also, and more generally, comprehend both any evidence that may establish the existence of a right, and the actual source of that right").

[135] *Case concerning the Temple of Preah Vihear (Cambodia v. Thailand)*, Merits, Judgment of 15 June 1962, *I.C.J. Reports 1962*, p. 6, at p. 23; *Fisheries* case, Judgment of 18 December 1951, *I.C.J. Reports 1951*, p. 116, at pp. 130–131.

[136] As stressed by, for example, McDougal, Lasswell and Miller (see footnote 74 above), p. 206.

[137] *Dispute concerning Access to Information under Article 9 of the OSPAR Convention between Ireland and the United Kingdom of Great Britain and Northern Ireland*, final award, 2 July 2003, UNRIAA, vol. XXIII (Sales No. E/F.04.V.15), p. 59, at p. 87, para. 84; ILR, vol. 126, p. 334, at p. 364.

[138] Karl (see footnote 130 above), p. 939; Sadat-Akhavi (see footnote 21 above), pp. 213–231. See also the separate opinions of Judges van Eysinga and Schücking in the *Oscar Chinn* case, Judgment of 12 December 1934, *P.C.I.J., Series A/B*, No. 63, pp. 132–135, 149.

following: the normative status of the general law (is it *jus cogens*?); who the beneficiaries of the obligations are (prohibition on deviating from law benefiting third parties, including individuals or non-State entities); and whether non-derogation may be otherwise inferred from the terms of the general rule (for instance its "integral" or "interdependent" nature, its *erga omnes* character, or subsequent practice creating an expectation of non-derogation).[139] Sometimes derogation—but equally application or modification—may be forbidden if it might "disrupt the balance established under the general treaty between the rights and obligations of States parties thereto".[140] Apart from treaties of a public law nature (however that category is defined), this would apply to constituent instruments of international organizations.[141]

110. In practice, these considerations may sometimes raise a question about what is "derogation", in contrast to "application", "updating" or "modification". Views on this may differ in a way reflecting divergent understandings of the general law. Does a technical application threaten a fragile package deal, for example? Such problems cannot be resolved by looking at the special law alone but only in forming a view of the nature and reasonable purposes of the general law.

4. The relational character of the general/special distinction

111. One of the difficulties in the *lex specialis* rule follows from the absence of clarity about the distinction between "general" and "special". For every general rule is particular, too, in the sense that it deals with some particular substance, that is, includes a certain description of fact as a *general* condition of its application. For example, the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction lays down general law on the use of landmines. Yet this is also a "special" aspect of the general rules of humanitarian law. On the other hand, all special law is general as it is a characteristic of rules that they apply to a class "generally". Every rule may be expressed in the following format: "for every *p,* it is true that the rule *q* applies". No rule applies to a single case. Even where the occasions for the application of a rule are few, in order for the standard to be a *rule* (instead of an *order* to somebody) it must be generally defined. This is reflected in the distinction made by many domestic legal systems between laws and acts, or *loi* and *acte*, *Gesetz* and *Massnahme*.

112. Generality and speciality are thus relational. A rule is never "general" or "special" in the abstract, but always in relation to some other rule. This relationality functions in two registers. A rule may be general or special in regard to its *subject matter* (fact description) or in regard to the *number of actors* whose behaviour is regulated by it.[142] Thus, the use of anti-personnel mines is a *special subject* within the *general subject* of humanitarian law. The distinction between general and local custom, again, provides an example of the register of number of actors covered. The registers may overlap. Thus, there may be a rule that is general in subject matter (such as a good-neighbourliness treaty) but valid only for a special relationship between a limited number of States (two).

(a) *Speciality in regard to parties*

113. In considering *lex specialis* as a conflict resolution technique, it is necessary to distinguish between cases where differing obligations are valid and applicable between the *same States* (A/B + A/B) and cases where the fulfilment of an obligation in one relationship (A/B) makes it impossible to fulfil an obligation in another relationship (A/C). These cases are usually discussed in terms of successive treaties (art. 30 of the 1969 Vienna Convention), and, although that set of issues will be the topic of chapter III of this report, it may still be useful to say how, if at all, *lex specialis* functions in these relationships.

114. In the first case (A/B + A/B) *lex specialis* does have a narrow field of application, A and B being entitled to amend their prior treaty or deviate from most general law as they wish. However, it cannot be automatically ruled out that, when two States conclude a generally worded treaty, for example, they thereby wish to abolish a prior, more specific treaty. In such cases, *lex specialis* may have some value as an indication of party will:[143] the *lex posterior* will not abrogate a prior treaty obligation if the speciality of that prior obligation may be taken as an indication that the parties did not envisage this outcome. The case where a limited number of parties to a multilateral treaty establish a special regime among themselves is, again, regulated as "modification" under article 41 of the 1969 Vienna Convention and cannot be discussed here in any detail.

115. The hard case is one where a State (A) has undertaken conflicting obligations in regard to two (or more) different States (B and C) and the question arises as to which of the obligations shall prevail. Here *lex specialis* appears largely irrelevant. Each bilateral (treaty) relationship is governed by *pacta sunt servanda,* with effects towards third parties excluded. Such conflict remains unregulated by article 30 of the 1969 Vienna Convention.[144] The State

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[139] For the distinction between normal ("reciprocal") and "integral" and "interdependent" obligations, see the third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur, *Yearbook ... 1958*, vol. II, document A/CN.4/115, pp. 40–41, para. 76, commentary to draft article 17. For the treatment of the distinction at the last stages of the Commission's work on State responsibility, see the third report on State responsibility by James Crawford, Special Rapporteur, *Yearbook … 2000*, vol. II (Part One), document A/CN.4/507 and Add.1–4, pp. 33–36, paras. 99–108. See further chapter IV below.

[140] Sadat-Akhavi (see footnote 21 above), p. 131.

[141] See, for example, I. Seidl-Hohenveldern, "Hierarchy of treaties", in J. Klabbers and R. Lefeber, *Essays on the Law of Treaties: A Collection of Essays in Honour of Bert Vierdag,* The Hague, Martinus Nijhoff, 1998, p. 7, at pp. 15–16; Karl (footnote 130 above), p. 940.

[142] Villiger (see footnote 77 above), p. 36; Kontou (see footnote 66 above), pp. 19–20.

[143] As observed by Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), p. 177, and Zuleeg (see footnote 74 above), p. 256. See further McNair (footnote 58 above), pp. 219–220. This corresponds to article 30, paragraph 4, of the 1969 Vienna Convention. See also Mus (footnote 21 above), pp. 217–219.

[144] Lauterpacht originally proposed that the later treaty should be held void unless it possessed "a degree of generality which imparts to [it] the character of legislative enactment[ ]" (first report on the law of treaties by Hersch Lauterpacht, Special Rapporteur, *Yearbook ... 1953*, vol. II, document A/CN.4/63, pp. 156–159). Later Special Rapporteurs (Fitzmaurice and Waldock), however, thought that this set the innocent party to the latter treaty at an unjustified disadvantage.

that is party to the conflicting instruments is in practice called upon to choose which treaty it will perform and which it will breach, with the consequence of State responsibility for the latter.[145]

(b) *Speciality in regard to "subject matter"*

116. As pointed out above, whether a rule is "special" or "general" requires a relational assessment: special *in what sense*? General *in what regard*? Given that only those that are in some respect similar can be compared—and indeed can enter into conflict—it must be assumed, as Fitzmaurice does, that *lex specialis* "can only apply where both the specific and general provision concerned deal with the same substantive matter".[146] Moreover, the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts requires that, for *lex specialis* to apply, the rules must deal with the same subject matter.[147]

117. However, as noted in chapter I, section B, above, the criterion of the "same subject matter" as a condition for applying a conflict rule is too unspecific to be useful. Different situations may be characterized differently depending on what regulatory purpose one has in mind. In a sense, most activities in the international world relate to the "environment"—so is every issue an "environmental" issue to be dealt with by environmental rules? But most forms of international behaviour also have some bearing on "human rights" or "security". These denominations are not about what rules should apply but how to characterize the relevant features of a state of affairs.

118. The example given above was that of maritime carriage of hazardous substances. Depending on what the interpreter sees as the relevant considerations, the case comes under one or another set of rules as *lex specialis*: is the point of the law to advance trade, flag or coastal State jurisdiction, or environmental protection? None of these perspectives enjoys intrinsic priority over the others. This is why, in a hard case, a justifiable decision would have to take all of these into account by articulating some systemic relationship among them. None can simply be brushed aside, for the same reason that the International Court of Justice, in *Legality of the Threat or Use of Nuclear Weapons*, did not brush aside human rights law or any of the other branches of law (environmental law, humanitarian law, the law on the use of force) that had been invoked. They were all in some regard *lex specialis*. This does not mean that its decision—that it "cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake"[148]—would have been beyond reproach. Perhaps the systemic unity that the Court canvassed and that peaked in the ultimate value of the "very survival of a State" could be submitted to critique. The point is not whether this decision was correct but that, in arriving at it, none of the laws were "automatically" set aside. They all contributed to bringing relevant considerations into the advisory opinion, whose authority lies precisely in the plausibility of what it then came to suggest as the law's determining purpose.

5. Conclusion for *lex specialis*: the omnipresence of "general law"

119. *Lex specialis derogat legi generali* refers to a standard technique of legal reasoning, operative in international law as in other fields of law understood as systems. Its power is entirely dependent on the normative considerations for which it provides articulation: sensitivity to context, capacity to reflect State will, concreteness, clarity, definiteness. Its functioning cannot be assessed independently of the role of considerations of the latter type in the specific context of legal reasoning. How does a particular agreement relate to the general law around it? Does it implement or support the latter, or does it perhaps deviate from it? Is the deviation tolerable or not? *No general, context-independent answers can be given to such questions*. In this sense, the *lex specialis* maxim cannot be meaningfully codified.

120. The role of *lex specialis* cannot be dissociated from assessments about the nature and purposes of the general law that it proposes to modify, replace, update or deviate from. This highlights the systemic nature of the reasoning of which arguments based on "special law" are an inextricable part. No rule, treaty or custom, however special its subject matter or limited the number of States concerned by it, applies in a vacuum. Its normative environment includes—as will be elaborated in more detail in chapter V below—not only whatever general law there may be on that very topic, but also principles that determine the relevant legal subjects, their basic rights and duties, and the means by which those rights and duties may be supplemented, modified or extinguished. Principles such as "sovereignty", "non-intervention", "self-determination", "sovereign equality", "non-use of force", *audiatur et altera pars*, "no one may profit from his own wrong" and so on, as well as interpretative maxims such as *lex specialis* and *lex posterior*, together with a host of other techniques of legal reasoning, are all part of this framework.

121. The relationship between general law and particular rules is ubiquitous. One can always ask of a particular rule of international law how it relates to its normative environment. This may not always be visible. States sometimes create particular rights and obligations where there appears to be no general law on the matter at all. In such cases, these rights and obligations do not seem, on the face of it, to have the character of *lex specialis*. They are not contrasted with anything more "general". The normative area "around" such rules appears to remain a zone of no-law, just as the matter they now cover used to be before the new regulations entered into force.

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[145] Zuleeg calls this the "principle of political freedom": Zuleeg (see footnote 74 above), pp. 267–268. See also Mus (footnote 21 above), pp. 227–231. The genesis and critique of article 30 of the 1969 Vienna Convention is well expressed in Sur, *L'interprétation en droit international public* (see footnote 107 above), pp. 167–171, and Sadat-Akhavi (see footnote 21 above), pp. 59–84. The most comprehensive discussion of the matter is in G. Binder, *Treaty Conflict and Political Contradiction: The Dialectic of Duplicity,* New York, Praeger, 1988.

[146] Fitzmaurice, "The law and procedure of the International Court of Justice 1951–4…" (see footnote 59 above), p. 237.

[147] Paras. (4) and (5) of the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 140–141.

[148] *Legality of the Threat or Use of Nuclear Weapons* (see footnote 122 above), p. 266, para. 105 (2) E (operative part).

122. The foregoing reflections suggest, however, that, whatever logical, conceptual or political problems there are around the old problem of "gaps" in international law,[149] there is at least one sense in which the idea of a zone of no-law as regards *lex specialis* is a conceptual *impossibility*. If a legal subject invokes a right based on "special law", then the validity of that claim can only be decided by reference to the whole background of a legal system that indicates how "special laws" are enacted, what is "special" about them, and how they are implemented, modified and terminated. It is impossible to make legal claims only in a limited sense, to opt for a part of the law while leaving the rest out; for legal reason works in a closed and circular system in which every recognition or non-recognition of a legal claim can only be decided by recognizing the correctness of other legal claims. This can be illustrated in the matter of so-called "self-contained regimes".

C. Self-contained (special) regimes

1. What are self-contained regimes?

123. The commentary to article 55 (*lex specialis*) of the Commission's draft articles on responsibility of States for internationally wrongful acts makes a distinction between "'weaker' forms [of *lex specialis*] such as specific treaty provisions on a single point" and "'strong' forms of *lex specialis*, including what are often referred to as self-contained regimes". Though the commentary refrains from defining what that "strong form" is, it gives two examples: the judgment by the Permanent Court of International Justice in the *S.S. "Wimbledon"* case (1923) and that of the International Court of Justice in *United States Diplomatic and Consular Staff in Tehran* (1980).[150]

124. This approach is not free of ambiguity. The Commission recognized and defined self-contained regimes as a subcategory (*i.e.* a "strong form") of *lex specialis* within the law of State responsibility. As such, it appears to cover the case where a special set of secondary rules claims priority over the secondary rules in the general law of State responsibility. Such a definition closely follows the use of the term by the International Court of Justice in the *United States Diplomatic and Consular Staff in Tehran* case, where the Court identified diplomatic law as a self-contained regime precisely by reference to the way it had set up its own "internal" system for reacting to breaches:

> The rules of diplomatic law, in short, constitute a self-contained regime which, on the one hand, lays down the receiving State's obligations regarding the facilities, privileges and immunities to be accorded to diplomatic missions and, on the other, foresees their possible abuse by members of the mission and specifies the means at the disposal of the receiving State to counter any such abuse.[151]

125. In other words, no reciprocal breach of diplomatic immunity is permissible; the receiving State may only resort to remedies in diplomatic law, which, the Court presumed, were "entirely efficacious". In *Military and Paramilitary Activities in and against Nicaragua*, the Court viewed human rights law somewhat analogously: the relevant treaties had their own regime of accountability that made other forms of reaction inappropriate.[152]

126. The judgment by the Permanent Court of International Justice in the *S.S. "Wimbledon"* case, however, uses a broader notion of a self-contained regime. At issue here was the status of the Kiel Canal, which was covered both by the general law on internal waterways and by the special rules on the Canal laid down in the Treaty of Versailles of 1919. Here is how the Court characterized the law applicable:

> Although the Kiel Canal, having been constructed by Germany in German territory, was, until 1919, an internal waterway of the State holding both banks, the Treaty [of Versailles] has taken care not to assimilate it to the other internal navigable waterways of the German Empire. A special section has been created at the end of Part XII … and in this special section rules exclusively designed for the Kiel Canal have been inserted; these rules differ on more than one point from those to which other internal navigable waterways of the Empire are subjected … This difference appears more especially from the fact that the Kiel Canal is open to the war vessels and transit traffic of all nations at peace with Germany, whereas free access to the other German navigable waterways … is limited to the Allied and Associated Powers alone … The provisions relating to the Kiel Canal … are therefore self-contained … The idea which underlies [them] is not to be sought by drawing an analogy from [provisions on other waterways] but rather by arguing *a contrario*, a method of argument which excludes them.[153]

127. Now here the notion of a "self-contained regime" is not limited to a special set of secondary rules. The "special" nature of the Kiel Canal regime appears instead to follow rather from the speciality of the relevant primary rules—especially obligations on Germany—laid down in the appropriate sections of the Treaty of Versailles than that of any special rules concerning their breach. Though the Court here used the expression "self-contained", it is hard to say whether it meant any more than that, where there were conventional rules on a problem, those rules would have priority over any external ones. This is clearly the sense of the expression it employed in a 1925 opinion, where it held that, in order to interpret certain expressions in a treaty, it was unnecessary to refer to external sources: "Everything therefore seems to indicate that, in regard to this point, the Convention is self-contained and that … the natural meaning of the words [should be employed]."[154]

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[149] The present discussion is not intended to take sides in the debate about the permissibility or desirability of "*non liquet*", as discussed between Hersch Lauterpacht and Julius Stone and elaborated in the writings of Lucien Siorat, Gerald Fitzmaurice and Ulrich Fastenrath, among others.

[150] Para. (5) of the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 140–141. *S.S. "Wimbledon"*, Judgment of 17 August 1923, *P.C.I.J., Series A,* No. 1, p. 14; *United States Diplomatic and Consular Staff in Tehran*, Judgment, *I.C.J. Reports 1980*, p. 3.

[151] *United States Diplomatic and Consular Staff in Tehran* (see footnote 150 above), p. 40, para. 86.

[152] The Court noted that the use of force was not "the appropriate method" to ensure respect for human rights, for "where human rights are protected by international conventions, that protection takes the form of such arrangements for monitoring or ensuring respect for human rights as are provided in the conventions themselves" (*Military and Paramilitary Activities in and against Nicaragua*, Merits, Judgment of 27 June 1986 (see footnote 51 above), pp. 134–135, paras. 267–268).

[153] *S.S. "Wimbledon"* (see footnote 150 above), pp. 23–24.

[154] *Exchange of Greek and Turkish Populations, Advisory Opinion of 21 February 1925, P.C.I.J., Series B*, No. 10, p. 20. For the Convention concerning the Exchange of Greek and Turkish Populations, signed at Lausanne on 30 January 1923, see League of Nations, *Treaty Series*, vol. XXXII, No. 807, p. 75.

This is, of course, a very common judicial technique and corresponds to the principle, stated above, concerning the pragmatic priority of treaty rules over general law.[155]

128. Thus, provisionally, it is possible to distinguish two uses of the notion of "self-contained regime". In a narrow sense, the term is used to denote a special set of secondary rules under the law of State responsibility that claims primacy over the general rules concerning consequences of a violation. In a broader sense, the term is used to refer to interrelated wholes of primary and secondary rules, sometimes also referred to as "systems" or "subsystems" of rules, that cover some particular problem differently from the way it would be covered under general law. That set of rules may either be a very limited one—for example, the regime of judicial cooperation between the International Criminal Court and States parties to the Rome Statute of the International Criminal Court[156]—or it may be rather wide, such as, for instance, the technique of interpreting the European Convention on Human Rights as "an instrument of European public order (*ordre public*) for the protection of individual human beings".[157] In this wider sense, self-containedness fuses with international law's contractual bias: where a matter is regulated by a treaty, there is normally no reason to have recourse to other sources.

129. But an occasional use of the notion of "self-contained regime" extends it even further than the *S.S. "Wimbledon"* case. Sometimes whole fields of functional specialization, of diplomatic and academic expertise, are described as self-contained (whether or not that word is used) in the sense that special rules and techniques of interpretation and administration are thought to apply.[158] For instance, fields such as "human rights law", "WTO law", "European law/European Union law", "humanitarian law" and "space law", among others, are often identified as "special" in the sense that rules of general international law are assumed to be modified or even excluded in their administration. One often speaks of "principles of international environmental law" or "principles of international human rights law" with the assumption that in some way those principles differ from what the general law provides for in analogous situations.

130. For instance, the principle of "dynamic" or teleological interpretation is much more deeply embedded in human rights law than in general international law.[159] In the view of the European Court of Human Rights, as is well known, in applying a "normative treaty" one should look for its object and purpose, not to the interpretation that would provide the most limited understanding of the obligations of States parties.[160] Making the contrast with general law even sharper, the Court has stated that

> [u]nlike international treaties of the classic kind, the [European] Convention [on Human Rights] comprises more than mere reciprocal engagements between contracting States. It creates, over and above a network of mutual, bilateral undertakings, objective obligations…[161]

131. In comparing itself to the International Court of Justice, the European Court has found "a fundamental difference in the role and purpose of the respective tribunals [which] provides a compelling basis for distinguishing Convention practice from that of the International Court".[162] That this is not an idiosyncratic aspect of the European Convention on Human Rights is suggested by the parallel attitudes within the Inter-American Court of Human Rights and the Human Rights Committee.[163]

132. A self-contained regime in this third sense has effect predominantly by providing interpretative guidance and direction that in some way deviates from the rules of general law. It covers a very wide set of differently interrelated rule systems, and the degree to which general law is assumed to be affected varies extensively. What, indeed, may be the normative sense of the division of international law into 17 different "topics" or "branches" in a report to the Commission by the United Nations Secretariat?[164] Even as it may be argued that such a classification is merely "relative" and serves principally didactic purposes, it is still common to link the branches or

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[155] This is frequently seen in territorial disputes. If a treaty determines a territorial boundary, then there is no need to discuss *uti possidetis*, inter-temporal law or the relevant *effectivités*. See, for example, *Territorial Dispute (Libyan Arab Jamahiriya/Chad)*, Judgment, *I.C.J. Reports 1994*, p. 6, at pp. 38–39, paras. 75–76.

[156] For this suggestion, see G. Sluiter, "The surrender of war criminals to the International Criminal Court", *Loyola of Los Angeles International and Comparative Law Review*, vol. 25 (2003), p. 605, at p. 629.

[157] *Cyprus v. Turkey* [GC], No. 25781/94, ECHR 2001-IV, p. 25, para. 78.

[158] This is implied in many of the essays in Barnhoorn and Wellens (eds.) (see footnote 12 above).

[159] For the role of "dynamic" or "teleological" interpretation in human rights law, see P. Wachsmann, "Les méthodes d'interprétation des conventions internationales relatives à la protection des droits de l'homme", in Société française pour le droit international, *La protection des droits de l'homme et l'évolution du droit international, Colloque de Strasbourg,* Paris, Pedone, 1998, p. 157, at pp. 188–193. See also L. Caflisch and A. A. Cançado Trindade, "Les conventions américaine et européenne des droits de l'homme et le droit international général", RGDIP, vol. 108 (2004), p. 5, at pp. 11–22.

[160] *Wemhoff v. Germany*, judgment of 27 June 1968, European Court of Human Rights, Series A, No. 7, p. 23, para. 8.

[161] *Ireland v. the United Kingdom*, judgment of 18 January 1978, European Court of Human Rights, Series A, No. 25, p. 90, para. 239. Likewise, *The Effect of Reservations on the Entry into Force of the American Convention on Human Rights (Arts. 74 and 75),* advisory opinion OC-2/82 of 24 September 1982, Inter-American Court of Human Rights, Series A, No. 2, pp. 20–23, paras. 29–33, and *Restrictions to the Death Penalty (Arts. 4(2) and 4(4) American Convention on Human Rights),* advisory opinion OC-3/83 of 8 September 1983, Inter-American Court of Human Rights, Series A, No. 3, pp. 76–77, para. 50.

[162] *Loizidou v. Turkey,* preliminary objections, 23 March 1995 (see footnote 56 above), pp. 26–27, paras. 70–72, and p. 29, paras. 84–85.

[163] Invoking the practice of the European Court of Human Rights, the Inter-American Court of Human Rights has identified as part of the "*corpus juris* of international human rights law" the principle that "human rights treaties are living instruments whose interpretation must consider the changes over time and present-day conditions" (*The Right to Information on Consular Assistance in the Framework of the Guarantees of the Due Process of Law,* advisory opinion OC-16/99 of 1 October 1999, Inter-American Court of Human Rights, Series A, No. 16, pp. 256–257, paras. 114–115). In its controversial general comment No. 24, the United Nations Human Rights Committee stated that the provisions of the 1969 Vienna Convention were "inappropriate to address the problem of reservations to human rights treaties. Such treaties, and the Covenant specifically, are not a web of inter-State exchanges of mutual obligations. They concern the endowment of individuals with rights. The principle of inter-State reciprocity has no place…" (general comment on issues relating to reservations made upon ratification or accession to the [International] Covenant [on Civil and Political Rights] or the Optional Protocols thereto, or in relation to declarations under article 41 of the Covenant (*Official Records of the General Assembly, Fiftieth Session, Supplement No. 40* (A/50/40), vol. I, annex V, para. 17)).

[164] Survey of international law: working paper prepared by the Secretary-General, *Yearbook ... 1971*, vol. II (Part Two), document A/CN.4/245, p. 1.

subsystems thus identified with special legal principles concerning the administration of the relevant rules.[165]

133. None of this is to say that the effect of a self-contained regime in this third sense would be clear or straightforward. Indeed, writers such as Brownlie and Pellet have been quite critical of placing too much emphasis on the speciality of something like "human rights law".[166] Likewise, the question of whether "international environmental law" designates a special branch of international law within which other interpretative principles apply than apply generally, or merely an aggregate of treaty and customary rules dealing with the environment, may perhaps seem altogether too abstract to be of much relevance.[167] The standard designation of the laws of armed conflict, for instance, as *lex specialis* and a self-contained regime—or even "a 'deviant' body of rules of public international law"[168]—leaves wide open the issue of to what extent the general rules of, say, the law of treaties are affected.[169] But however doubtful international law "generalists" may be of the normative nature of such designations, specialists in such fields regularly hold them to be important. Functionally oriented as such regimes are, they also serve to identify and articulate interests that help to direct the administration of the relevant rules.[170]

134. This may be illustrated by the debate over the role of general international law in trade law. There is no doubt that the WTO dispute settlement system is a self-contained regime in the sense that article 23 of the Understanding on Rules and Procedures Governing the Settlement of Disputes excludes unilateral determinations of breach or countermeasures outside the "specific subsystem" of the WTO regime.[171] It is sometimes argued that general international law should not be applied in the administration of WTO treaties as they differ fundamentally in their general orientation from regular public international law: where the latter is based on State sovereignty, the former derives its justification from the theory of comparative advantage. Principles of interpretation inspired by the latter may often be in complete contrast with those inspired by the former.[172] It is true that, by now, WTO dispute settlement organs have used international customary law and general principles very widely to interpret WTO treaties.[173] Few lawyers would persist in holding the treaties covered by WTO, whatever their nature, as fully closed to public international law.[174] The issue remains, however, that trade rationality may occasionally—perhaps often—be at odds with the rationality of protecting the sovereign, and that, when a choice has to be made, the general objectives and "principles" of trade law—however that is understood—will seem more plausible to trade institutions and experts than traditional interpretative techniques.

135. The three notions of "self-contained regime" are not clearly distinguished from each other. A special system of secondary rules—the main case covered by article 55 of the draft articles on responsibility of States for internationally wrongful acts—is usually the creation of a single treaty or very closely related set of treaties. An example might be the "non-compliance system" under the 1985 Vienna Convention for the Protection of the Ozone Layer and the related 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, which has priority over the standard dispute settlement clause in the 1969 Vienna Convention.[175] A special regime on some (territorial, functional) problem area—for example, the *S.S. "Wimbledon"* case—may cover several instruments and practices, united by their orientation towards a single problem: establishment of a free trade area, say, or a universal trade regime such as the one administered under WTO. It goes without saying that a treaty regime may be special in both the first and the second sense, that is as a self-contained regime of remedies (State responsibility) and a set of special rules on the adoption, modification, administration or termination of the relevant obligations.

136. The widest notion covers a whole area of functional specialization or teleological orientation at a universal scale: the laws of armed conflict, for instance, identified as *lex specialis* by the International Court of Justice in *Legality of the Threat or Use of Nuclear Weapons*, or environmental law, often thought to be accompanied by special principles, such as the principle of precaution, "polluter pays" and "sustainable development", that seek to direct the administration of environmental matters.[176]

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[165] See, for example, the discussion in P. Malanczuk, "Space law as a branch of international law", in Barnhoorn and Wellens (eds.) (footnote 12 above), p. 143, at pp. 144–146.

[166] See I. Brownlie, *Principles of Public International Law*, 6th ed., Oxford, Oxford University Press, 2003, pp. 529–530 (a criticism of the speciality of human rights law); see also A. Pellet, "Droits-de-l'hommisme et droit international", Gilberto Amado memorial lecture, 18 July 2000.

[167] This issue is at the heart of T. Kuokkanen, *International Law and the Environment: Variations on a Theme*, The Hague, Kluwer Law International, 2002 (tracing a history of international lawyers' treatment of environmental problems from the fairly straightforward application of traditional rules to the complex management of resource regimes).

[168] H. H. G. Post, "Some curiosities in the sources of the law of armed conflict conceived in a general international legal perspective", in Barnhoorn and Wellens (eds.) (see footnote 12 above), p. 96.

[169] The potential conflict between the need to uphold the binding force of peace treaties and the principle laid down in article 52 of the 1969 Vienna Convention (invalidity in the event of coercion of a State by the threat or use of force), for example, may not be soluble at all within the confines of the Convention.

[170] In a sociological sense, they may even be said to express different social rationalities: a clash between them would appear as a clash of rationalities—for example, environmental rationality against trade rationality, human rights rationality against the rationality of diplomatic intercourse. Thus described, fragmentation of international law would articulate a rather fundamental aspect of globalized social reality itself: the replacement of territoriality as the principle of social differentiation by (non-territorial) functionality. See further Koskenniemi and Leino, "Fragmentation of international law? …" (footnote 14 above), and A. Fischer-Lescano and G. Teubner, *Regime-Kollisionen*, forthcoming.

[171] The term "specific subsystem" is used in Marceau, "WTO dispute settlement and human rights" (see footnote 43 above), pp. 755, 766–779.

[172] J. L. Dunoff, "The WTO in transition: of constituents, competence and coherence", *George Washington International Law Review*, vol. 33, Nos. 3 and 4 (2001), pp. 991–992.

[173] See, generally, J. Cameron and K. R. Gray, "Principles of international law in the WTO Dispute Settlement Body", *International and Comparative Law Quarterly*, vol. 50 (2001), p. 248, and É. Canal-Forgues, "Sur l'interprétation dans le droit de l'OMC", RGDIP, vol. 105 (2001), p. 5.

[174] See further section C.3 (*b*) (ii) below.

[175] See article 8 of the Montreal Protocol on Substances that Deplete the Ozone Layer and comments in M. Koskenniemi, "Breach of treaty or non-compliance? Reflections on the enforcement of the Montreal Protocol", *Yearbook of International Environmental Law*, vol. 3 (1992), p. 123.

[176] See, for example, Brownlie, *Principles of Public International Law* (footnote 166 above), pp. 274–281. See also *Legality of the Threat or Use of Nuclear Weapons* (footnote 122 above), p. 226 *passim*.

We can see the significance of such speciality in situations such as the *EC—Hormones* case, where the European Community argued within WTO that the precautionary principle included in the 1992 Declaration of Rio on the Environment and Development (Rio Declaration)[177] should influence the assessment of the justifiability of the European Community prohibition on the importation of certain meat and meat products. The WTO Appellate Body, however, stated that, while it might have "crystallized into a general principle of customary international environmental law", it was not clear that it had become a part of general customary law.[178] Cantoning the principle as one of "customary environmental law" left open, of course, the question of under what circumstances it might have become applicable under "international trade law".

137. It often seems that "much of the action in international law [has] shifted to specialized regimes".[179] At least as concerns State responsibility, this has been the price to pay for a uniform regime. To succeed in devising a single set of secondary rules (and this was the focus of some disagreement among the Special Rapporteurs), they needed to be of so general a nature that when States then adopt primary rules on some subject they are naturally tempted also to adopt secondary rules tailored precisely to the breach of those primary rules. The turn from formal dispute settlement to "softer", non-adversarial forms of accountability under environmental treaties ("non-compliance mechanisms") may serve as an example. Such variation need not be overly problematic. As Crawford has observed, there never was any assumption in the Commission that its system of responsibility would be "one size fits all". Whether States would wish to follow the general law or opt out from it was both a "political question and (in relation to existing regimes) a question of interpretation".[180] But if, instead of enhancing the effectiveness of the relevant obligations, the regime serves to dilute existing standards—a problem famously identified years ago by Prosper Weil[181]—then the need for residual application, or a "fall-back" onto the general law of State responsibility, may seem called for.

2. Self-contained regimes and the work of the International Law Commission on State responsibility

138. Special Rapporteur Roberto Ago came to the question in connection with his discussion of the "source" and "content" of the international obligation breached.[182] Does the identity of a norm that has been breached affect the type of responsibility that follows? As is well-known, Ago discussed this question predominantly in terms of the gradation of State responsibility through the distinction between international "crimes" and "simple breaches".[183] There is no need to embark upon that question here. Nevertheless, it is useful to note that, apart from that distinction, Ago did not see a need for classifying different consequences by reference to the source or the content of the obligation breached. What he aimed at, and achieved, was a single, generally applicable set of rules about wrongfulness that could cover the breach of any primary rules. As a counterpart to that generality, he accepted that States were at liberty to provide for special consequences for the breach of particular types of primary rules:

> In the text of a particular treaty concluded between them, some States may well provide for a special régime of responsibility for the breach of obligations for which the treaty makes specific provision…[184]

139. The matter of how these special treaty regimes would relate to the general rules was not pursued by Ago but was taken up at great length by Special Rapporteur Riphagen in 1982, in connection with his discussion of what he called the "general problem underlying the drafting of part 2 of the draft articles". What for Ago had been a matter of taking note of the self-evident competence of States to establish, by treaty, special systems of State responsibility appeared to become quite central, and rather problematic, for the drafting of part 2. In Riphagen's words:

> international law as it stands today is not modelled on one system only, but on a variety of interrelated subsystems, within each of which the so-called "primary rules" and the so-called "secondary rules" are closely intertwined—indeed, inseparable.[185]

140. As Riphagen saw it, the presence of such "subsystems" (which he also sometimes termed "regimes"), that is, interrelated systems of primary and secondary rules as well as procedures for realizing responsibility,[186] was a very common occurrence: when States elaborated primary rules, the question of what to do if these were violated emerged almost automatically; and in such cases, the States would often provide for some special rules on the content, degree and forms of State responsibility. Though the main case seemed to be the one where a special regime was provided by treaty, Riphagen, in apparent contrast to Ago, also assumed that the content of a particular primary rule might justify supplementing it with special secondary rules. The attempt to construct such linkages became quite central for Riphagen, who, for this purpose, discussed aggression and other breaches of international peace and security, as well as countermeasures in connection with a wide definition of objective regimes. Apart from the question of international "crimes", the discussion did not proceed towards the identification of other specific types of relationships between particular primary rules and the consequences of their violation.[187]

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[177] Adopted in Rio de Janeiro on 14 June 1992, *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992*, vol. I: *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex I, p. 2.

[178] *EC Measures Concerning Meat and Meat Products (Hormones)* (see footnote 57 above), paras. 123–125. For the "precautionary principle" in environmental law, see Daillier and Pellet, *Droit international public* (footnote 74 above), pp. 1307–1310.

[179] D. Bodansky and J. R. Crook, "Symposium: The ILC's State responsibility articles: introduction and overview", AJIL, vol. 96, No. 4 (2002), p. 773, at p. 774.

[180] J. Crawford, "The ILC's articles on responsibility of States for internationally wrongful acts: a retrospect", *ibid*., p. 874, at p. 880.

[181] P. Weil, "Towards relative normativity in international law?", *ibid*., vol. 77 (1983), p. 413.

[182] See especially the fifth report on State responsibility by Roberto Ago, Special Rapporteur, *Yearbook ... 1976*, vol. II (Part One), document A/CN.4/291 and Add.1–2, pp. 6–7, paras. 12–15.

[183] *Ibid.*, p. 26, para. 80.

[184] *Ibid.*, p. 6, para. 14. See also draft article 17 proposed by Special Rapporteur Ago in his fifth report, *ibid.*, p. 24, para. 71.

[185] Third report on State responsibility by Willem Riphagen, Special Rapporteur, *Yearbook ... 1982*, vol. II (Part One), document A/CN.4/354 and Add.1–2, p. 28, para. 35.

[186] *Ibid.*, para. 38.

[187] Fourth report on State responsibility by Willem Riphagen, Special Rapporteur, *Yearbook ... 1983*, vol. II (Part One), document A/CN.4/366 and Add.1, pp. 8–24, paras. 31–130.

141. Riphagen's approach was inspired by a "functional analysis" of three different types of rules of international law: those seeking to keep States separate, those that reflected what he called a "common substratum" and those that sought to organize parallel exercises of State sovereignty.[188] Whatever its sociological merits, the analysis failed to convince the Commission, which did not integrate his "systems" or "subsystems" into the draft articles. His attempt to depart from Ago by classifying the consequences of the breach of obligations by the source or content of those obligations (general custom—conventional international law—judicial, quasi-judicial and other institutional decisions) likewise never ended up in the draft.[189] This did not mean that the Commission wished to exclude the possibility of tailoring the consequences of a breach to the nature of the primary rule violated, only that it felt it sufficient to deal with this by a savings clause, the formulations of which finally ended up in what became article 55.

142. It was, in other words, accepted that the articles were of a residual nature, and that special regimes of responsibility could be adopted by States. What was the relationship of such regimes to the general law? Even though Riphagen used the term "self-contained", and foresaw a "theoretical" possibility that the relevant set of "conduct rules, procedural rules and status provisions [might form] a closed legal circuit",[190] in fact he never wanted to say they were completely isolated:

> This does not necessarily mean that the existence of the subsystem excludes permanently the application of any general rules of customary international law relating to the legal consequences of wrongful acts. … [T]he subsystem itself as a whole may fail, in which case a fall-back on another subsystem may be unavoidable.[191]

143. This seems evident. Two observations are needed, however. First, though Riphagen only speaks of the "failure" of a subsystem, it must be assumed that the same consequence may also follow from the simple silence of the subsystem. Second, although Riphagen only speaks of a fall-back on other "subsystems", it is hard to see why he would wish to exclude fall-back on the general rules of State responsibility—as indeed he specifically says elsewhere:

> Every one of the many different régimes (or subsystems) of State responsibility … is in present-day international law subject to the universal system of the United Nations Charter, including its elaboration in unanimously adopted declarations…[192]

144. Riphagen did not elaborate on the nature or scope of this "universal system"—apart from noting that it also included *jus cogens*. That question was in due course completely absorbed by the question of "crimes".[193]

145. Despite the terminology used by Riphagen, the substance of his arguments is relatively uncontroversial and does little other than recapitulate points made in the first part of this study concerning the relationship between special and general law and the pragmatic need to prioritize the former over the latter. The draft articles, Riphagen noted, "cannot exhaustively deal with the legal consequences of any and every breach of any and every legal obligation".[194] Thus, although he had described the question of subsystems as a "general problem underlying the drafting of part 2", Riphagen felt it could still be resolved in a relatively simple and uncontroversial way by a general savings clause.[195] The result was then that the provisions of the draft itself became "no more than rebuttable presumptions as to the legal consequences of internationally wrongful acts".[196]

146. At this stage, Riphagen noted the possibility that there might be violations of rules under two subsystems providing for parallel or differing consequences (*e.g.* countermeasures might be allowed under one subsystem but prohibited under another). While the *lex specialis* rule might resolve some such problems, it could not automatically resolve a possible conflict where the object and purpose of the subsystems might differ—an example might concern the application of principles of environmental law within the administration of a trade instrument. For this purpose Riphagen suggested that "it would still seem necessary to draw up a catalogue of possible legal consequences in a certain order of gravity, and to indicate the principal circumstances precluding one or more legal consequences in a general way".[197] This led him to a discussion of the hierarchy of legal consequences—a discussion that peaked in, and was in the end exhausted by, a discussion of international crimes.[198] In the end, the only hierarchy proposed by Riphagen was two limitations to the savings clause: a self-contained regime could deviate neither from rules of *jus cogens,* nor from "the provisions and procedures of the Charter of the United Nations relating to the maintenance of international peace and security".[199]

147. Like Riphagen, his successor, Arangio-Ruiz, accepted the "presence of those treaty-based systems or combinations of systems which tend to address, within their own contractual or special framework, the legal

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[188] Third report on State responsibility by Willem Riphagen, Special Rapporteur (A/CN.4/354 and Add.1–2) (see footnote 185 above), pp. 28–30, paras. 39–53.

[189] For the proposal, see *ibid.*, pp. 40–44, paras. 106–128.

[190] Willem Riphagen, *Yearbook ... 1982*, vol. I, summary record of the 1731st meeting of the Commission, p. 202, para. 16.

[191] Third report on State responsibility by Willem Riphagen, Special Rapporteur (A/CN.4/354 and Add.1–2) (see footnote 185 above), p. 30, para. 54.

[192] *Ibid.*, p. 39, para. 104.

[193] *Ibid.*, p. 39, paras. 104–105.

[194] *Ibid.*, p. 31, para. 55.

[195] The original form of that clause in 1982 was as follows: "The provisions of this part apply to every breach by a State of an international obligation, except to the extent that the legal consequences of such a breach are prescribed by the rule or rules of international law establishing the obligation or by other applicable rules of international law" (*ibid.*, p. 47, para. 147, art. 3). The effect of this was to provide for the application of the Commission's draft "*unless otherwise provided for*" (*ibid*., para. (5) of the commentary). See also *ibid.*, p. 39, para. 103. The Commission agreed. In 1983, it adopted the following savings clause: "…the provisions of this part govern the legal consequences of any internationally wrongful act of a State, except where and to the extent that those legal consequences have been determined by other rules of international law relating specifically to the internationally wrongful act in question" (*Yearbook ... 1983*, vol. II, (Part Two), p. 42, para. 133, art. 2).

[196] Third report on State responsibility by Willem Riphagen, Special Rapporteur (A/CN.4/354 and Add.1–2) (see footnote 185 above), p. 31, para. 57.

[197] *Ibid.*, p. 34, para. 77.

[198] For Willem Riphagen, "crimes" denoted one special subsystem of international law that provided a special set of consequences (*ibid.*, pp. 44–46, paras. 130–143).

[199] Willem Riphagen, with regard to draft article 2 proposed by the Special Rapporteur in his fifth report, *Yearbook ... 1984*, vol. I, summary record of the 1858th meeting of the Commission, p. 261, paras. 4, 6–9.

regime governing a considerable number of relationships among the States parties, including in particular the consequences of any breaches of the obligations of States parties under the system".[200] Within such a broad, systemic view, he noted that "some legal scholars" had identified a category of "self-contained regimes" that affected "the *faculté* of States parties to resort to the remedial measures which are open to them under general international law".[201] Arangio-Ruiz made express the difference between the broader view that spoke in terms of systems or subsystems of rules in general and the narrower view that he identified with Bruno Simma's influential 1985 article, focusing on subsystems intended

> to exclude more or less totally the application of the general legal consequences of wrongful acts, in particular the application of the countermeasures normally at the disposal of an injured party.[202]

148. Arangio-Ruiz himself appeared initially to adhere to the wider notion, noting as examples of self-contained regimes the "system" set up by the treaties establishing the European Communities, the regime created by the human rights treaties, and diplomatic law, as stated by the International Court of Justice in the *United States Diplomatic and Consular Staff in Tehran* case. Developing his argument, however, he focused on the narrower problem, namely whether the remedial measures—especially countermeasures—in such regimes "affect[ed] to any degree the possibility for legal recourse by States parties to the measures provided for, or otherwise lawful, under general international law".[203] Consequently, most of Arangio-Ruiz's treatment of self-contained regimes—in particular his discussion of the relevant State practice—sought an answer to the question of whether such regimes were fully isolated from general law ("formed closed legal circuits") or, in other words, excluded future recourse to the remedies in the general law of State responsibility. His answer to that question was an emphatic no. Because he defined self-contained regimes as sets of rules that were hermetically isolated from general law, he found no such regimes in practice: "none of the supposedly self-contained regimes seems to materialize *in concreto.*"[204]

149. Arangio-Ruiz did not oppose the establishment of special treaty-based regimes. They were needed "to achieve, by means of *ad hoc* machinery, a more effective, organized monitoring of violations and responses thereto". But he rejected the conclusion that this would bar them from ever resorting to general law.[205] Fall-back to general remedies was needed at least in the event that a State failed to receive effective reparation or an unlawful act persisted while the procedures in the special regime were in progress.[206] He admitted that derogations or "fall-backs" should only take place in "extreme cases". A special regime was, after all, a multilateral bargain from which each party received some benefits for submitting to a common procedure. Nonetheless, his main point concerned the openness of allegedly "closed" regimes. The priority of the special regime followed from the general rules of international law and treaty interpretation, but it did not entail a presumption of abandonment of the guarantees of general law—this is how Arangio-Ruiz read the clause concerning the residual nature of the draft articles in the (then) article 2. It would fail to correspond to the intent of the States wishing to strengthen (instead of to derogate from) the ordinary rules on State responsibility.[207]

150. Special Rapporteur James Crawford came to self-contained regimes in 2000 in connection with draft articles 37 to 39, which dealt with the relationship between the Commission's draft and the law outside it. Article 37 contained a general clause on the residual role of the draft: special rules would be allowed. Crawford refrained from responding in general terms to the question of whether such special rules were also exclusive. This was "always a question of interpretation in each case".[208] As an example of the case where a self-contained regime was "exclusive", Crawford referred to the WTO remedies system. As a case where the special regime only modified some aspect of the general law, he referred to article 41 of the European Convention on Human Rights. Crawford left open, however, whether "exclusivity" here meant exclusive and *final* replacement of the general law or merely its substitution at an initial stage, with the possibility of "fall-back" if the self-contained regime had, as Riphagen had put it, "failed". The two examples survive in the commentary to the draft articles.

151. In this connection, article 37 was moved from part 2 into part 4 (general provisions), where it became article 55, was titled *lex specialis,* and came to cover the whole draft: both the conditions of existence of a wrongful act and the content and implementation of State responsibility.[209] As pointed out at the beginning of this report, the Commission did not mean by this that every deviation under article 55 would have the nature of a "self-contained regime". It distinguished between what it called a "strong" and a "weak" form of *lex specialis* and labelled only the former "self-contained". Why it used the terminology of "strong"/"weak" is far from clear, however, and possibly a source of confusion. The operative distinction in the commentary is not between provisions that are normatively "stronger" and those that are normatively "weaker", but rather between "specific treaty provisions on a single point" (regular *lex specialis*—the Commission's "weak" form) and whatever could be

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[200] Third report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur, *Yearbook ... 1991*, vol. II (Part One), document A/CN.4/440 and Add.1, p. 25, para. 84.

[201] *Ibid*.

[202] *Ibid.*, footnote 167, quoting B. Simma, "Self-contained regimes", *Netherlands Yearbook of International Law*, vol. 16 (1985), pp. 117.

[203] Third report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur (A/CN.4/440 and Add.1) (see footnote 200 above), p. 26, paras. 85–86. Likewise the fourth report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur, *Yearbook ... 1992*, vol. II (Part One), document A/CN.4/444 and Add.1–3, p. 35, para. 97.

[204] Fourth report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur (A/CN.4/444 and Add.1–3) (see footnote 203 above), p. 40, para. 112.

[205] *Ibid.*, p. 40, paras. 112 and 114.

[206] *Ibid.*, pp. 40–41, para. 115.

[207] *Ibid.*, p. 42, paras. 123–124.

[208] Third report on State responsibility by James Crawford, Special Rapporteur, *Yearbook … 2000*, vol. II (Part One), document A/CN.4/507 and Add.1–4, p. 110, para. 420.

[209] Article 55 (*Lex specialis*) reads: "These articles do not apply where and to the extent that the conditions for the existence of an internationally wrongful act or the content or implementation of the international responsibility of a State are governed by special rules of international law" (*Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 140).

extracted from the *S.S. "Wimbledon"* and *United States Diplomatic and Consular Staff in Tehran* cases (the Commission's "strong" form). Because the Commission only defined "self-contained regimes" by reference to the examples of these two cases, it thereby imported, as we have seen, two different meanings into the draft: (*a*) the view of a self-contained regime as a special set of consequences for wrongfulness (*United States Diplomatic and Consular Staff in Tehran*); and (*b*) the view of a self-contained regime as a set of primary and secondary rules governing the administration of a problem (*S.S. "Wimbledon"*). Neither of these is necessarily any "stronger" (at least in the sense of more binding or less amenable to derogation) than a "specific treaty provision[ ] on a single point".

152. The following conclusions may be drawn from the Commission's treatment of "self-contained regimes" in the context of State responsibility:

(*a*) *Definition*. The concept of "self-contained regimes" was constantly used by the Special Rapporteurs in a narrow and a wide sense, and both were imported into the Commission's commentary on article 55. The following qualify as a self-contained regime: (*i*) a special set of secondary rules that determine the consequences of a breach of certain primary rules (including the procedures of such determination); and (*ii*) any interrelated cluster (set, regime, subsystem) of rules on a limited problem, together with rules for the creation, interpretation, application, modification or termination—in a word, administration—of those rules. In addition, academic commentary and practice make constant reference to a third notion—"branches of international law"—that are also assumed to function in the manner of self-contained regimes, claiming to be regulated by their own principles;

(*b*) *Establishment*. States are entitled to set up self-contained regimes that have priority over the general rules in the draft articles. The only limits to this entitlement are the same as those that apply to *lex specialis*. This means, among other things, that "States cannot, even as between themselves, provide for legal consequences of a breach of their mutual obligations which would authorize acts contrary to peremptory norms of general international law … the special rules in question [must] have at least the same legal rank as those expressed in the articles";[210]

(*c*) *Relationship between a self-contained regime and general law under normal circumstances*. The relationship between a self-contained regime and the general law on State responsibility should be determined principally by interpreting the instrument(s) that established the regime. However, no self-contained regime is a "closed legal circuit". While a special/treaty regime has (as *lex specialis*) priority in its sphere of application, that sphere should normally be interpreted in the way that exceptions are, that is, in a limited way. In any case, the rules of the general law on State responsibility—like the rest of general international law—supplement it to the extent that no special derogation is provided in or can be inferred from the instrument(s) constituting the regime;

(*d*) *Failure of a self-contained regime*. The question of residual application of the general rules in situations not expressly covered by a "self-contained regime", or possible "fall-back" to the general rules of State responsibility in case of the failure of that regime, is not expressly covered in the draft or in the commentary. However, it is dealt with by Special Rapporteurs Riphagen and Arangio-Ruiz, both of whom hold it self-evident that, once a self-contained regime fails, recourse to general law must be allowed. What such failure might consist of has not been explicitly addressed by the Commission. However, an analogy could be drawn from the conditions under which the exhaustion of local remedies rule need not be followed. These would be cases where the remedy would be manifestly unavailable or ineffective or where it would be otherwise unreasonable to expect recourse to it;

(*e*) *Inappropriateness of the term "self-contained"*. None of the Special Rapporteurs and none of the cases discussed by them implies the idea of special systems or regimes that would be fully isolated from general international law. To this extent, the notion of a "self-contained regime" is simply misleading. Although the degree to which a regime of responsibility, a set of rules on a problem or a branch of international law needs to be supplemented by general law varies, there is no support for the view that anywhere would general law be fully excluded. As will become apparent below, such exclusion may not even be conceptually possible. Hence, it is suggested that the term "self-contained regime" be replaced by "special regime".

3. The relationship between self-contained regimes outside State responsibility and general international law

153. In regard to fragmentation, the main questions of interest concern the relationship between the self-contained (special) regime in each of its three meanings, as discussed above, and general law: (*a*) the conditions for the establishment of a special regime; (*b*) the scope of application of the regime *vis-à-vis* general international law under normal circumstances; and (*c*) the conditions for "fall-back" to general rules owing to the regime's failure.

(a) *Establishment of self-contained (special) regimes*

154. As to the first question, there is little doubt that most international law—and not only the law of State responsibility—is dispositive, and that contracting out by establishing a regime is possible, limited only to the extent that such limitation may be derived from the *jus cogens* nature or otherwise compelling character of general law. Aside from peremptory norms, at least the following limitations should be considered:

(*a*) The regime may not deviate from the law benefiting third parties, including individuals and non-State entities;

(*b*) The regime may not deviate from general law if the obligations of general law are of an "integral" or

[210] Para. (2) of the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts, *ibid*.

"interdependent" nature or have an *erga omnes* character or if practice has created a legitimate expectation of non-derogation;[211]

(*c*) The regime may not deviate from treaties that have a public law nature or which are constituent instruments of international organizations.[212]

155. However, different considerations may apply to the establishment of self-contained (special) regimes in each of the three senses of that expression.

156. Setting up a special regime of State responsibility—that is, special consequences for breach—is normally possible only by a treaty that identifies the primary rules to which it applies, the nature, content and form of the (special) responsibility, and the institutions that are to apply it. Though it is not conceptually inconceivable that such a regime might emerge tacitly, or by way of custom (*e.g.* a regime of collective countermeasures by non-injured States, as foreseen under article 54 of the draft articles on responsibility of States for internationally wrongful acts[213]), this would seem exceptional.

157. The establishment of a special regime in the wider sense (*S.S. "Wimbledon"*, any interlinked sets of rules, both primary and secondary) would also normally take place by means of one or several treaties (*e.g.* the WTO "covered treaties"). However, it may also occur that a set of treaty provisions develops over time, without conscious decision by States parties, perhaps through the activity of an implementing organ, into a regime with its own rules of administration, modification and termination. It took until 1963 before the European Court of Justice defined the (then) European Economic Community as a "new legal order of international law".[214] The development of European law into a self-contained regime—including the principles of direct effect, supremacy and the doctrine of fundamental rights—has to a very large extent taken place through the interpretative activity of the European Court of Justice, and not always with the full support of all member States. As we have seen, the same is largely (though in a much narrower sense) true of human rights law as well. Though the States parties have, of course, established implementing organs, and thereby taken the first step towards self-containedness, the extent of the autonomy of these regimes has largely been determined by those organs. The standard example here is the development of a doctrine on the separability of reservations to the European Convention on Human Rights.[215]

158. The widest of special regimes—denominations such as "international criminal law", "humanitarian law", "trade law", "environmental law" and so on—emerge from the informal activity of lawyers, diplomats and pressure groups, more through shifts in legal culture and in response to practical needs of specialization than as conscious acts of regime creation. Such notions mirror the functional diversification of international society or, more prosaically, the activities of particular caucuses seeking to articulate or strengthen preferences and orientations that seem not to have received sufficient attention under the general law. The application of special "principles" by specialized implementation organs is a visible feature of such regimes.

(b) *The relationship between the self-contained (special) regime and general international law under normal circumstances*

159. The relationship between the special regime and the general law—that is to say, the degree to which a regime is self-contained in the first place—will be predominantly a matter of interpreting the treaties that form the regime. To what extent does a general law serve to fill gaps or to assist in the interpretation or application—that is, in the administration—of the regime? Once it is clear that no regime is completely isolated from general law, the question emerges as to their relationship *inter se*.

160. It is possible to illustrate these linkages in practice by reference to the operation of the supervisory bodies in human rights and trade law, two regimes specifically mentioned in the Commission's commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts.

(i) Example: human rights regimes

161. Human rights organs, such as the European Court of Human Rights and the Inter-American Court of Human Rights, regularly refer to rules and principles of general international law concerning not only treaty interpretation but matters such as statehood, jurisdiction and immunity, as well as a wide variety of principles of procedural propriety.[216] The Inter-American Court has used its wide advisory jurisdiction to interpret not only other human rights instruments (such as the European Convention on Human Rights or the 1966 International Covenant on Economic, Social and Cultural Rights and International Covenant on Civil and Political Rights) but also instruments such as the Vienna Convention on Consular Relations of 1963.[217] In an opinion from 1988 it expressly referred to the international law principle of continuity of the State, according to which State responsibility persists despite changes of government.[218] In a series of recent cases, the European Court of Human Rights has clarified the relationship between the rights in the European Convention on Human Rights and State immunities, recognizing the validity of the latter over, for instance, the right of access to courts

[211] See the discussion on *erga omnes* obligations in chapter IV below.

[212] See chapter II, section B, on *lex specialis,* above.

[213] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 137.

[214] Case 26/62, *NV Algemene Transport—en Expeditie Onderneming van Gend & Loos v. Netherlands Inland Revenue Administration*, judgment of 5 February 1963, *European Court Reports*, English special edition 1963, p. 1, at p. 12.

[215] See *Belilos v. Switzerland* (footnote 55 above), p. 24, para. 50, and p. 28, para. 60.

[216] On this, see especially the review by Caflisch and Cançado Trindade (footnote 159 above).

[217] See *"Other Treaties" Subject to the Consultative Jurisdiction of the Court (Art. 64 American Convention on Human Rights)*, advisory opinion OC-1/82 of 24 September 1982, Inter-American Court of Human Rights, Series A, No. 1.

[218] *Velásquez Rodríguez v. Honduras*, judgment (merits), 29 July 1988, Inter-American Court of Human Rights, Series C, No. 4, para. 184; see also *Inter-American Yearbook on Human Rights* (1988), p. 914, at p. 990, para. 184.

under article 6, paragraph 1, of the Convention. In particular, it has pointed out that

> [t]he Convention … cannot be interpreted in a vacuum. The Court must be mindful of the Convention's special character as a human rights treaty, and it must also take the relevant rules of international law into account … The Convention should so far as possible be interpreted in harmony with other rules of international law of which it forms part, including those relating to the grant of State immunity.[219]

162. There was no *a priori* assumption that the rules of the Convention would override those of general law. On the contrary, the Court assumed the priority of the general law on immunity, making the point that

> measures taken by a High Contracting Party which reflect recognised rules of public international law on State immunity cannot in principle be regarded as imposing a disproportionate restriction on the right of access to court as embodied in Article 6 § 1. Just as the right of access to court is an inherent part of the fair trial guarantee in that Article, so some restrictions on access must likewise be regarded as inherent, an example being those limitations generally accepted by the community of nations as part of the doctrine of State immunity.[220]

163. That the Convention should not be treated as if it existed in a legal vacuum has also been affirmed by the Court in regard to the rules of State jurisdiction and State responsibility. In the *Banković* case (1999), it made this point:

> [T]he Court reiterates that the principles underlying the Convention cannot be interpreted and applied in a vacuum. The Court must also take into account any relevant rules of international law when examining questions concerning its jurisdiction and, consequently, determine State responsibility in conformity with the governing principles of international law, although it must remain mindful of the Convention's special character as a human rights treaty. The Convention should be interpreted as far as possible in harmony with other principles of international law of which it forms part.[221]

164. In other words, the European Convention on Human Rights is not, and has not been conceived as, a self-contained regime in the sense that recourse to general law would have been prevented. On the contrary, the Court makes constant use of general international law, with the presumption that the Convention rights should be read in harmony with that general law and without an *a priori* assumption that Convention rights would be overriding.

(ii) Example: World Trade Organization law

165. Though perhaps more controversial, the matter is not significantly different in the WTO system. Although, as we have seen, it has sometimes been suggested that WTO "covered treaties" form a closed system, this position has been rejected by the WTO Appellate Body in terms that resemble the language used by the European Court of Human Rights, noting that WTO agreements should not be read "in clinical isolation from public international law".[222] Since then, the Appellate Body has frequently sought "additional interpretative guidance, as appropriate, from the general principles of international law".[223] More recently a WTO Panel has had occasion to specify this, as follows:

> We take note that Article 3.2 of the [Understanding on Rules and Procedures Governing the Settlement of Disputes] requires that we seek within the context of a particular dispute to clarify the existing provisions of the WTO agreements in accordance with customary rules of interpretation of public international law. However, the relationship of the WTO Agreements to customary international law is broader than this. Customary international law applies generally to the economic relations between the WTO members. Such international law applies to the extent that the WTO treaty agreements do not "contract out" from it. To put it another way, to the extent there is no conflict or inconsistency, or an expression in a covered WTO agreement that implies differently, we are of the view that the customary rules of international law apply to the WTO treaties and to the process of treaty formation under the WTO.[224]

166. Nonetheless, academic opinion is divided as to how far this actually goes, with focus especially on the use by WTO organs of law from other special regimes, especially environmental law, or provisions of non-WTO treaties. But whatever view one takes of the *competence* of WTO panels and the Appellate Body, that position is neither identical to nor determinative of how to view the question of whether "WTO law" (or, more precisely, "WTO covered agreements") is also *substantively* self-contained.[225]

167. The starting point for analysis is usually articles 3, paragraph 2, and 19, paragraph 2, of the Understanding on Rules and Procedures Governing the Settlement of Disputes, according to which WTO dispute settlement is intended to preserve the rights and obligations of members under the agreements covered.[226] This has sometimes been interpreted to mean that non-WTO law cannot be used in any way to affect whatever "rights and obligations" are provided under WTO law.[227] An extreme interpretation might view this as a complete setting aside of all non-WTO law. However, this is countered by the further language of article 3, paragraph 2, of the Understanding, according to which panels and the Appellate Body are to apply the "customary rules of interpretation of public

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[219] *McElhinney v. Ireland* [GC], No. 31253/96, ECHR 2001-XI (extracts), para. 36. Similarly, *Al-Adsani v. the United Kingdom* [GC], No. 35763/97, *ibid*., para. 55.

[220] *Fogarty v. the United Kingdom* [GC], No. 37112/97, *ibid*. (extracts), para. 36.

[221] *Banković and Others v. Belgium and Others (dec.)* [GC], No. 52207/99, ECHR 2001-XII, p. 351, para. 57 (references omitted).

[222] *United States—Standards for Reformulated and Conventional Gasoline* (see footnote 48 above), p. 17.

[223] *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report, WT/DS58/AB/R, adopted 6 November 1998, para. 158.

[224] *Korea—Measures Affecting Government Procurement* (see footnote 44 above), para. 7.96.

[225] This point is made with emphasis in Pauwelyn, *Conflict of Norms…* (see footnote 21 above), pp. 460–463.

[226] Article 3, paragraph 2, provides:

"Recommendations and rulings of the [dispute settlement body] cannot add to or diminish the rights and obligations provided in the covered agreements."

Article 19, paragraph 2, provides that:

"…in their findings and recommendations, the panel and Appellate Body cannot add to or diminish the rights and obligations provided in the covered agreements."

[227] Thus Joel Trachtman has argued that "WTO dispute resolution panels and the Appellate Body are limited to the application of substantive WTO law and are not authorized to apply general substantive international law or other conventional international law" (Trachtman, "The domain of WTO dispute resolution" (see footnote 47 above), p. 347–348). Trachtman allows, of course, the application of the rules of interpretation in the 1969 Vienna Convention, as well as any other rules specifically incorporated. These, he understands, would mainly deal with procedural, not substantive law.

international law"—a provision that incorporates not only the 1969 Vienna Convention but also, through articles 31 and 32 thereof, any other rules of treaty interpretation, including, for example, article 31, paragraph 3 (*c*), under which an interpretation should take into account "[a]ny relevant rules of international law applicable in the relations between the parties".[228]

168. The 1969 Vienna Convention rules on treaty interpretation—articles 31 and 32—are recognized as customary law and widely applied in the WTO system.[229] But the Appellate Body has frequently discussed and applied other public international law standards as well. There has been considerable debate on the relationship between the WTO "covered treaties" and environmental agreements.[230] The Panel in *United States—Import Prohibition of Certain Shrimp and Shrimp Products* (the *"Shrimp–Turtle* case", 1998) defined the notion of "exhaustible natural resources" in article XX (*g*) of the General Agreement on Tariffs and Trade (GATT) so as to include only "finite resources such as minerals, rather than biological or renewable resources". The Appellate Body did not share this view. The notion needed to be interpreted in view of recent developments: "the generic term 'natural resources' in Article XX (*g*) is not 'static' in its content or reference but is rather 'by definition evolutionary'". In order to seek such an updated meaning, it referred, among other instruments, to the 1992 Rio Declaration[231] and Agenda 21,[232] the Convention on Biological Diversity of 1992, and the United Nations Convention on the Law of the Sea, and thereby reached the interpretation that all natural resources, both living and non-living, were included.[233]

169. Though many views have been taken on the question of applicable law within the WTO, two major positions seem to have emerged. One holds WTO to be part of international law, operating within the general system of international law rules and principles. This position may be rationalized, for example, by presuming that, when States adopted the Marrakesh agreements, they were doing so in accordance with and under the rules and principles of international law and that there was no reason to assume—absent express agreements to the contrary—that these rules and principles would not continue to govern the administration of those agreements. The other position focuses on the provisions in the Understanding on Rules and Procedures Governing the Settlement of Disputes requiring that panels and the Appellate Body neither add to nor diminish the obligations under the "covered treaties". In practice, however, the two positions may not be altogether difficult to reconcile with almost any practice under WTO. The latter view may accept even a wide use of international customary law and other treaties by viewing them as incorporated into WTO either specifically (through art. 3, para. 2, of the Understanding) or implicitly by reference to the context in which the WTO agreements were made. In any case, both positions can accommodate a very wide-ranging practice (somewhat like the "monist" and "dualist" positions within domestic law), including statements such as that by the Panel in the 2000 *Korea—Measures Affecting Government Procurement*[234] case. There seems, therefore, little reason in principle to depart from the view that general international law supplements WTO law, unless it has been specifically excluded, and that so do other treaties, which should, preferably, be read in harmony with the treaties covered by WTO.[235]

170. This does not exclude the emergence of a specific "WTO ethos" in the interpretation of WTO agreements, just as it is possible to discern a "human rights ethos" in the work of the human rights treaty bodies. Nor does it prevent the setting aside of normal State responsibility rules in the governance of WTO treaties. Indeed, this was the *raison d'être* of the WTO system, and it receives normative force from the *lex specialis* rules of general law itself. Even as it is clear that the competence of WTO bodies is limited to consideration of claims under the agreements covered (and not, for example, under environmental or human rights treaties), when elucidating the content of the relevant rights and obligations WTO bodies must situate those rights and obligations within the overall context of general international law (including the relevant environmental and human rights treaties).

171. Nor is this any idiosyncrasy of WTO; it extends to practices under regional trade agreements. For example, in *Feldman v. Mexico*, an Arbitration Tribunal under the North American Free Trade Agreement needed to determine the meaning of the expression "expropriation" under article 1110 of the Agreement. The Tribunal found that the article was "of such generality as to be difficult to apply in specific cases". Accordingly, it read it against

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[228] See chapter V below.

[229] In noting this, the WTO Appellate Body has used the International Court of Justice as its authority for determining the customary law nature of the rules on interpretation in the 1969 Vienna Convention. See *United States—Standards for Reformulated and Conventional Gasoline* (footnote 48 above), pp. 19–20. The customary law nature of article 32 is affirmed in *Japan—Taxes on Alcoholic Beverages*, WTO Appellate Body report, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, adopted 1 November 1996, p. 10. For further discussion, see Lindroos and Mehling, "Dispelling the Chimera of 'self-contained regimes'…" (footnote 43 above).

[230] See J. Cameron and J. Robinson, "The use of trade provisions in international environmental agreements and their compatibility with the GATT", *Yearbook of International Environmental Law*, vol. 2 (1991), p. 3. For a good overview of the case law until the *United States—Import Prohibition of Certain Shrimp and Shrimp Products* case (see footnote 223 above), see M. J. Trebilcock and R. Howse, *The Regulation of International Trade*, 2nd ed., London, Routledge, 1999, pp. 397–420. See further G. Marceau, "Conflicts of norms and conflicts of jurisdictions: the relationship between the WTO Agreement and MEAs and other treaties", *Journal of World Trade*, vol. 35 (2001), pp. 1081–1131.

[231] *Report of the United Nations Conference on Environment and Development…* (see footnote 177 above).

[232] Adopted in Rio de Janeiro, 14 June 1992, *ibid.*, resolution 1, annex II, p. 9.

[233] *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Panel report, WT/DS58/R and Corr.1, adopted 6 November 1998, as modified by Appellate Body report WT/DS58/AB/R, para 3.237; *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report (see footnote 223 above), paras. 127–131. Moreover, it viewed their exhaustibility by reference to the fact that all seven sea turtle species were listed in appendix I to the Convention on International Trade in Endangered Species of Wild Flora and Fauna, *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report, paras. 132–133.

[234] *Korea—Measures Affecting Government Procurement* (see footnote 44 above).

[235] A recent work taking the latter position is Pauwelyn, *Conflict of Norms…* (see footnote 21 above).

the "principles of customary international law" in order to clarify whether it applied to State action against grey market cigarette exports.[236]

(iii) Conclusions on the relationship between self-contained (special) regimes and general international law under normal circumstances

172. None of the treaty regimes in existence today is self-contained in the sense that the application of general international law would be generally excluded. On the contrary, treaty bodies in human rights and trade law, for example, make constant use of general international law in the administration of their special regimes. Though States have the *faculté* to set aside much general law by means of special systems of responsibility or rule administration, what conclusions should be drawn from this depends somewhat on the normative coverage, or "thickness", of the regime. The scope of a special State responsibility regime is normally defined by the relevant treaty. No assumption is entailed that general law would not apply outside of these special provisions. In the case of an interlocked set of rules on regime creation, administration, amendment and termination, general law may have been excluded in a more extensive way. The very set of rules may be governed by special principles of interpretation, reflecting the object and purpose of the regime. This may affect, in particular, the competence of the interpreting organs tasked with advancing the purposes of the regime.

173. Finally, the widest of self-contained regimes—"environmental law", "space law", etc.—interact with other such denominations or clusters, indicating special principles that should be taken into account. It is typical of this third sense that it has neither clear boundaries nor a strictly determined normative force. It brings to legal decision-making considerations and elements that claim relevance and need to be balanced against other considerations. No firm exclusion is implied, the significance of this being that it points to factors and practices that may have more or less relevance depending on how the problem at issue is described (is it a "trade law" problem; it is a problem in "humanitarian law" or in "human rights law"?).

174. As Bruno Simma has suggested in his leading article on the question of self-contained regimes, the main question of interest here is: "*Under what circumstances, if any, can there be a fall-back on the general legal consequences of internationally wrongful acts?*"[237] As pointed out above, the Special Rapporteurs never considered self-contained regimes or subsystems as "closed legal circuits" in the sense that they would completely and finally exclude the application of general law. A minimal conclusion that one can draw from practice and the literature is that articles 31 and 32 of the 1969 Vienna Convention are always applicable, unless specifically set aside by other principles of interpretation. This has been affirmed by practically all existing bodies applying international law.[238] Because these articles—and in particular article 31, paragraph 3 (*c*)—already situate treaty interpretation within the general context of the rights and obligations of the parties, the question of the application of general international law (that is, general customary law and general principles of law) may seem to become somewhat academic. That they are always applicable is very strongly suggested by practice and doctrine alike, but especially by the writings of public international law generalists.[239] The position recently taken by Antonio Cassese is representative. Discussing the special procedures inscribed in human rights treaties to supervise the administration of the relevant treaties and react to breaches, he points out:

> It would be contrary to the spirit of the whole body of international law on human rights to suggest that the monitoring system envisaged in the [International] Covenant [on Civil and Political Rights] and the Protocol should bar States parties from "leaving" the self-contained regime contemplated in the Covenant and falling back on the customary law system of resort to peaceful counter-measures.[240]

175. The same position is taken in numerous academic writings in regard to human rights treaties. Pauwelyn summarizes the position succinctly:

> [I]n their treaty relations States can "contract out" of one, more or, in theory, all rules of international law (other than those of *jus cogens*), but they cannot contract out of the *system* of international law.[241]

176. There are, as Pauwelyn notes, policy reasons for this. But there is also a logical point to make. States cannot contract out from the *pacta sunt servanda* principle, unless the speciality of the regime is thought to lie in its creating no obligations at all (and even then it would seem hard to see where the binding force of such an agreement would lie). Overall, the claim (almost never heard) that

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[236] *Feldman v. United Mexican States*, International Centre for Settlement of Investment Disputes (ICSID) case No. ARB(AF)/99/1, award of 16 December 2002, *ICSID Review–Foreign Investment Law Journal*, vol. 18, No. 2 (October 2003), p. 488, at p. 523, para. 98; ILR, vol. 126, pp. 58–65.

[237] Simma, "Self-contained regimes" (see footnote 202 above), p. 118.

[238] For some recent affirmations, see *Sovereignty over Pulau Ligitan and Pulau Sipadan* (footnote 134 above), pp. 645–646, para. 37 (with a list of references to the Court's previous affirmations of the same). For similar recent affirmations by other tribunals, see, for example: *Japan—Taxes on Alcoholic Beverages* (footnote 229 above), pp. 10–12 (sect. D); *Restrictions to the Death Penalty (Arts. 4 (2) and 4 (4) American Convention on Human Rights)* (footnote 161 above), p. 76; *Ethyl Corp. v. The Government of Canada,* 28 November 1997, Arbitral Tribunal under the North American Free Trade Agreement, ILR, vol. 122 (2002), pp. 278–279, paras. 50–52 (noting that the United States had also accepted their status as custom); *Waste Management, Inc. v. United Mexican States*, ICSID case No. ARB(AF)/98/2, 2 June 2000, *ICSID Review–Foreign Investment Law Journal*, vol. 15 (2000), p. 214, at p. 243, footnote 2 (dissenting opinion of Keith Highet) (see also ILR, vol. 121 (2002), p. 51, footnote 2). The European Court of Human Rights also stated, early on, that it was "prepared to consider … that it should be guided by Articles 31 to 33 of the [1969] Vienna Convention" (*Golder v. the United Kingdom*, 21 February 1975, European Court of Human Rights, Series A, No. 18, p. 14, para. 29). It affirmed this recently ("the Convention must be interpreted in the light of the rules set out in the 1969 Vienna Convention") in *Banković and Others v. Belgium and Others* (see footnote 221 above), pp. 350–351, para. 55. For the rather wider formulation of the Iran–United States Claims Tribunal ("the task of the Tribunal is to interpret the relevant provisions of the Algiers Accords on the basis of the Vienna Convention on the Law of Treaties") see *Sedco, Inc. v. National Iranian Oil Company*, Iran–United States Claims Tribunal, case No. 129, 9 IRAN–U.S. C.T.R., p. 249, at p. 257 (with references to earlier formulations of the same). For the Algiers Accords, and in particular the Declaration concerning the Settlement of Claims of 19 January 1981, see ILM, vol. 20 (1981), p. 230.

[239] For a review of positions, see the fourth report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur (A/CN.4/444 and Add.1–3) (footnote 203 above), pp. 36–38, paras. 99–106.

[240] A. Cassese, *International Law*, 2nd ed., Oxford, Oxford University Press, 2005, p. 276.

[241] Pauwelyn, *Conflict of Norms…* (see footnote 21 above), p. 37.

self-contained regimes are completely cocooned outside international law resembles the views held by late-nineteenth-century lawyers about the (dualist) relationship between national and international law.[242]

177. Under this view, general international law would be applicable only if specifically incorporated as part of a special regime. Whatever the validity of this view under national law, it is very hard to see how it could be applied to relations between international legal "regimes" and general international law. In the first place, the regime undoubtedly receives—or possibly fails to receive—binding force under general international law. The conditions of validity and invalidity of regime-establishment acts are assessed by general law. But this also means that most of the 1969 Vienna Convention—at least its customary law parts, including above all articles 31 and 32—automatically, and without incorporation, *is* a part of the regime: indeed, it is only by virtue of this Convention that the regime may be identified as such and delimited against the rest of international law. Thus, in a recent case, the International Court of Justice held that a provision in a *compromis* where it was authorized to apply the "rules and principles of international law" was superfluous if principles of treaty interpretation were meant:

> the Court would in any event have been entitled to apply the general rules of international treaty interpretation for the purpose of interpreting the [relevant] Treaty.[243]

178. In fact, there is no evidence of *any* rule regime that would claim to be valid or operative independently of the 1969 Vienna Convention.

179. In the second place, and unlike national law, international law regimes are always partial in the sense that they regulate only some aspects of State behaviour, while presuming the presence of a large number of other rules in order to function at all. They are always situated in a "systemic" environment. That, after all, is the *very meaning of the generality* of certain customary law rules or general principles of law. As the French–Mexican Claims Commission pointed out in the *Georges Pinson* case:

> *Toute convention internationale doit être reputée s'en référer tacitement au droit international commun, pour toutes les questions qu'elle ne résout pas elle-même en termes exprès et d'une façon differente.*[244]

180. Or, as stated more recently by the OSPAR Convention Arbitral Tribunal:

> the first duty of the Tribunal is to apply the OSPAR Convention. An international Tribunal … will also apply customary international law and general principles unless and to the extent that the parties have created a *lex specialis*.[245]

181. This is also reflected in the wide-ranging jurisprudence concerning State contracts. Initially, there may have been a sense that these existed in a legal vacuum. However, since the *Saudi Arabia v. ARAMCO* award (1958), it has become standard practice to refer to international law as the governing legal order. There, the Tribunal stated:

> It is obvious that no contract can exist *in vacuo*, *i.e.*, without being based on a legal system. The conclusion of a contract is not left to the unfettered discretion of the Parties. It is necessarily related to some positive law which gives legal effects to the reciprocal and concordant manifestations of intent made by the Parties.[246]

182. Even as the proper legal order for such contracts may remain a matter of some controversy, most lawyers would accept the statement of the sole arbitrator in *TOPCO/CALASIATIC* (1977) that this is "a particular and new branch of international law: the international law of contracts".[247] The consequences of this were also stated by the Iran–United States Claims Tribunal:

> As a *lex specialis* in the relations between the two countries, the Treaty supersedes the *lex generalis*, namely customary international law … however … the rules of customary law may be useful in order to fill in possible *lacunae* of the Treaty, to ascertain the meaning of undefined terms in its text or, more generally, to aid interpretation and implementation of its provisions.[248]

183. These rules and principles include at least those concerning statehood, jurisdiction, State representation, State succession, the creation and transfer of sovereignty, privileges and immunities of diplomats, territorial status (*e.g.* freedom of the high seas), rules on nationality, and the concept of "crimes against humanity", not to mention all the various rules that not only become applicable but are hierarchically superior to regime rules by virtue of Article 103 of the Charter of the United Nations. In their review of the practice of the European Court of Human Rights and the Inter-American Court of Human Rights, a member of the former and the President of the latter highlighted in detail the use of the international law of State responsibility, immunity, jurisdiction and the "general principles of law recognized by civilized nations" (not always distinguished from general principles of *international law*) by their treaty bodies. They concluded that

> *les systèmes en cause font partie intégrante du droit international général et conventionnel. Cela signifie que l'idée du fractionnement du droit international … n'a guère de pertinence pour les systèmes internationaux de protection des droits de l'homme.*[249]

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[242] In fact, this analogy is made in J. P. Trachtman, "Institutional linkage: transcending 'trade and…'", AJIL, vol. 96, No. 1 (January 2002), p. 77, at pp. 89–91.

[243] *Kasikili/Sedudu Island (Botswana/Namibia)*, Judgment, *I.C.J. Reports 1999*, p. 1045, at p. 1102, para. 93.

[244] "Every international convention must be deemed tacitly to refer to general principles of international law for all the questions which it does not itself resolve in express terms and in a different way": *Georges Pinson (France) v. United Mexican States*, French–Mexican Claims Commission, award No. 1, 19 October 1928, UNRIAA, vol. V (Sales No. 1952.V.3), p. 327, at p. 422.

[245] *Dispute concerning Access to Information under Article 9 of the OSPAR Convention between Ireland and the United Kingdom of Great Britain and Northern Ireland* (see footnote 137 above), UNRIAA, vol. XXIII, p. 87, para. 84; ILR, vol. 126, p. 364.

[246] *Saudi Arabia v. Arabian American Oil Company (ARAMCO)*, award of 23 August 1958, ILR vol. 27, p. 117, at p. 165.

[247] *Texaco Overseas Petroleum Company/California Asiatic Oil Company v. Government of the Libyan Arab Republic*, ILM, vol. 17 (1978), p. 13, para. 32. For an overview of the development and present status of the "international law of investment", see, for example, A. F. Lowenfeld, *International Economic Law*, Oxford, Oxford University Press, 2002, pp. 387–493.

[248] *Amoco International Finance Corporation v. The Government of the Islamic Republic of Iran* (see footnote 125 above), p. 222, para. 112. Many thanks are due to Carlos López Hurtado for this and some other references and arguments.

[249] "[T]he systems in question are an integral part of general and conventional international law. This means that the notion of fragmentation of international law … is entirely irrelevant for international systems of human rights protection": Caflisch and Cançado Trindade (see footnote 159 above), pp. 60–61.

184. To press a perhaps self-evident point, there is no special "WTO rule" on statehood, or a "human rights notion" of transit passage, just as there is no special rule about State immunities within the European Court of Human Rights or a WTO-specific notion of "exhaustible resources". Moreover, the general rules operate unless their operation has been expressly excluded. This was the view of the Chamber of the International Court of Justice concerning the applicability of the local remedies rule in the *Elettronica Sicula S.p.A (ELSI)* case. It had no doubt that

> the parties to a treaty can therein either agree that the local remedies rule shall not apply to claims based on alleged breaches of that treaty; or confirm that it shall apply. Yet the Chamber finds itself unable to accept that an important principle of customary international law should be held to have been tacitly dispensed with, in the absence of any words making clear an intention to do so.[250]

185. It is in the nature of general law to apply generally, *i.e.* inasmuch as it has not been specifically excluded. It cannot plausibly be claimed that these parts of the law—"important principles" as the Court put it—have validity only insofar as they have been "incorporated" into the relevant regimes. There has never been any act of incorporation. But more relevantly, it is hard to see how regime builders might have agreed *not* to incorporate (that is, opt out from) such general principles. The debate about new States' competence to pick and choose the customary law they wish to apply ended after decolonization without there having been much "rejection" of old custom. Few actors would care to establish relations with a special regime that claimed a blanket rejection of all general international law. Why, in such a case, would anyone (including the regime's establishing members) take the regime's engagements seriously?

(*c*) *Fall-back onto general rules owing to the failure of self-contained regimes*

186. The third case—the "failure" of a self-contained regime—is one that most commentators would agree brings the general law into operation. However, it is far from clear what may count as "failure". In assessing this, the nature of the regime must clearly be taken into account.[251] For most special regimes, their *raison d'être* is to strengthen the law on some particular subject matter, to provide more effective protection for certain interests or to create more context-sensitive (and in this sense more "just") regulation of a matter than what is offered under the general law. Reporting and individual applications to human rights treaty bodies, and the non-compliance mechanisms under environmental treaties, clearly seek to attain precisely this. The same is true of the rapid and effective WTO dispute settlement system.

187. Sometimes the risk may emerge that a special regime in fact waters down the relevant obligations. This may be caused, for instance, by the accumulation of an excessive backlog in the treatment of individual applications, a non-professional or biased discussion of national reports, or any other intentional or unintentional malfunction in the institutions of the regime. A dispute-settlement mechanism under the regime may function so slowly or so inefficiently that damage continues to be caused, without a reasonable prospect of a just settlement in sight. At some such point the regime will have "failed"—and at that point the possibility must become open for the beneficiaries of the relevant rights to turn to the institutions and mechanisms of general international law.

188. No general criteria can be set up to determine what counts as "regime failure". The failure might be either substantive or procedural. A substantive failure takes place if the regime completely fails to attain the purpose for which it was created: members of a free trade regime persist in their protectionist practices; pollution of a watercourse continues unabated, despite pledges by riparian States parties to a local environmental treaty. Inasmuch as the failure can be articulated as a "material breach" under article 60 of the 1969 Vienna Convention, then the avenues indicated in that article should be open to the members of the regime. It cannot be excluded, either, that the facts relating to regime failure may be invoked as a "fundamental change of circumstances" under article 62 of the 1969 Vienna Convention.

189. The other alternative is a procedural failure: the institutions of the regime fail to function in the way they should. For instance, they have provided for reparation, but that reparation is not forthcoming.[252] When it is a question of how far the States parties to a special regime must continue to have resort to the special procedures, analogous considerations would seem relevant, as in the context of the requirement of exhaustion of local remedies in the law of diplomatic protection. In this regard, the main principles are enunciated in draft articles 14 and 15 of the Commission's current draft on diplomatic protection. According to article 15, local remedies do not need to be exhausted where:

> "(*a*) there are no reasonably available local remedies to provide effective redress, or the local remedies provide no reasonable possibility of such redress;
>
> "(*b*) there is undue delay in the remedial process which is attributable to the State alleged to be responsible".[253]

190. This would seem to apply when the State suffering the damage is itself a member of the regime. For those outside the regime, of course, general law continues to prevail. But what might be the situation in cases where the injury is not suffered by a formal member of the regime,

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[250] *Elettronica Sicula S.p.A. (ELSI)*, Judgment, *I.C.J. Reports 1989*, p. 15, at p. 42, para. 50.

[251] See, for example, the fourth report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur (A/CN.4/444 and Add.1–3) (footnote 203 above), pp. 40–41, paras. 115–116; see also Simma, "Self-contained regimes" (footnote 202 above), pp. 111–131; D. Alland, *Justice privée et ordre juridique international: Étude théorique des contre-mesures en droit international public*, Paris, Pedone, 1994, pp. 278–291; C. S. Homsi, "'Self-contained regimes'—no cop-out for North Korea!", *Suffolk Transnational Law Review*, vol. 24, No. 1 (winter 2000), pp. 99–123; and the various essays in Barnhoorn and Wellens (eds.) (footnote 12 above). The idea that a special regime, such as the WTO legal order, "falls back" on general international law while the degree of "contracting out" remains a matter of interpretation is also usefully discussed in Pauwelyn, *Conflict of Norms…* (see footnote 21 above), pp. 205–236.

[252] This is the example mentioned in the fourth report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur (A/CN.4/444 and Add.1–3) (see footnote 203 above), pp. 40–41, para. 115 (*a*).

[253] *Yearbook … 2006*, vol. II (Part Two), p. 46, draft article 15.

but the regime nonetheless fails to bring about the objective set? For instance, the non-compliance mechanism under article 8 of the Montreal Protocol on Substances that Deplete the Ozone Layer is failing to bring any of the parties in routine breach of their emission reduction obligations under article 2 of the Protocol into order. A number of States parties to the 1966 International Covenant on Civil and Political Rights continue to engage in massive human rights violations, irrespective of the Human Rights Committee's opinions and conclusions. When may the other parties take countermeasures against a State in breach of its obligations under articles 49 or 54 of the draft articles on responsibility of States for internationally wrongful acts?[254] There are no clear answers to these questions, but it seems evident that at some point there must be a "fall-back" on general rules of State responsibility, including countermeasures and general mechanisms of dispute settlement (*e.g.* recourse to the International Court of Justice under a compulsory jurisdiction declaration made by two members of a special regime).[255]

4. Conclusions on self-contained regimes

191. The rationale for special regimes is the same as that for *lex specialis*. They take better account of the particularities of the subject matter to which they relate; they regulate it more effectively than general law and follow closely the preferences of their members. Where the application of the general law concerning reactions to breaches (especially countermeasures) might be inappropriate or counterproductive, a self-contained regime, such as, for instance, the system of *persona non grata* under diplomatic law, may be better suited to deal with such breaches. However, as the Commission observes, it is equally clear that, if the general law has the character of *jus cogens*, then no derogation is permitted. In fact, the assumption seems to be that, in order to justify derogation, the special rules "have at least the same legal rank as those expressed in the articles".[256]

192. But no regime is self-contained. Even in the case of well-developed regimes, general law has at least two types of function. First, it provides the normative background that comes in to fulfil aspects of the regime's operation not specifically provided by the regime. In the event of the dissolution of a State that is party to a dispute within the WTO dispute settlement system, for instance, general rules of State succession will determine the fate of any claims reciprocally made by and against the dissolved State. This report has illustrated some of the ways in which this supplementing takes place. Second, the rules of general law also come into operation if the special regime fails to function properly. Such failure might be substantive or procedural, and at least some of the avenues open to regime members in such cases are outlined in the 1969 Vienna Convention itself. The rules on State responsibility might also be relevant in such situations.

193. Third, the term "self-contained regime" is a misnomer. No legal regime is isolated from general international law. It is doubtful whether such isolation is even possible: a regime can receive (or fail to receive) legally binding force ("validity") only by reference to (valid and binding) rules or principles *outside itself*. In previous debates within the Commission over "self-contained regimes", "regimes" and "subsystems", there never was any assumption that they would be hermetically isolated from general law. It is useful to note that article 42 of the 1969 Vienna Convention contains a "Munchausen provision" that is directly relevant here, for it expressly situates every legal regime within its framework. According to this article:

Validity and continuance in force of treaties

1. The validity of a treaty or of the consent of a State to be bound by a treaty may be impeached only through the application of the present Convention.

194. This, it could be said, is the "minimum level" at which the 1969 Vienna Convention regulates everything that happens in the world of regime building and regime administration. Through it, as well as through the reasoning above, every special regime links up with general international law in three ways:

(*a*) The conditions of validity of a special regime, including the validity of its establishment, are determined by principles of general international law;

(*b*) Because a special regime is "special", it does not provide all the conditions for its operation. General law provides resources for this purpose. This is not a matter of general law having been incorporated into the special regime but follows from the "generality" of that general law—or in other words, from international law's systemic nature. General international law influences the operation of a special regime above all in three distinct ways:

(i) General international law (that is, general custom and general principles of law) fills gaps in the special regime and provides interpretative direction for its operation;

(ii) Most of the 1969 Vienna Convention (including, above all, articles 31 and 32) is valid as customary law and applicable in the sense referred to in (*i*) above;

(iii) General international law contains principles of hierarchy that control the operation of the special regime, above all in determining peremptory norms of international law but also in providing resources for determining, in the event of a conflict, which regime should be given priority or, at least, what consequences follow from the breach of the requirements of one regime by deferring to another (usually State responsibility);

(*c*) Finally, general international law provides the consequences of the "failure" of a special regime. When a special regime "fails" cannot always be determined from within that regime, however. Inability to attain an

[254] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 129, 137.

[255] See further Simma, "Self-contained regimes" (footnote 202 above), pp. 118–135, and Alland (footnote 251 above), pp. 290–291. This would also seem to apply to the failure of the special regime of the European Union. See also L. Boisson de Chazournes, *Les contremesures dans les relations internationales économiques*, Paris, Pedone, 1992, p. 185.

[256] Para. (2) of the commentary to article 55 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 140.

authoritative determination of failure may be precisely one aspect of such failure—*e.g.* when a special dispute settlement system ceases to function.

D. Regionalism

1. What is "regionalism"?

195. "Regionalism" does not figure predominantly in international law treatises and, when it does, it rarely takes the shape of a "rule" or a "principle". Neither does it denote any substantive area of the law, on a par with "human rights" or "trade law". When the question of regionalism is raised, it is usually done in order to discuss the question of the universality of international law, its historical development or the varying influences behind its substantive parts. Only rarely does it appear in an openly normative shape, as a kind of regional *lex specialis* that is intended either as an application or modification of a general rule or, perhaps in particular, as a deviation from such a rule.

196. Regionalism is a well-established theme of foreign policy debates. Discussions about the best approaches to regulating matters of, say, economic policy or collective security habitually refer to the advantages of institutional frameworks that are narrower than the universal. As the United Nations was being debated between the Great Powers at the end of the Second World War, the choice between regionalism and universalism weighed heavily on the planning of the post-war collective security system. Churchill, for example, originally preferred a set of regional systems—"a Council of Europe and a Council of Asia under the common roof of the world organization".[257] As debates turned in favour of a single system under the supervision of the Security Council, concern was expressed in San Francisco over the way this opened the door to intervention by outside powers in the management of regional security (especially in Latin America).[258]

197. Sometimes particular orientations of legal method—for example an "Anglo-American approach"—or policies adopted by or typical of particular groups of States—say, "Third World approaches"—also raise questions of regionalism. Debates over human rights and cultural relativism, too, occasionally highlight these tensions. In such debates, the focus is on the question of whether some rules or principles, including notions of human rights, should automatically be applied in a universal fashion. What is the scope for regional variation in a system intended as universal?

198. The varying uses of the expression "regionalism" as part of legal and political rhetoric call for an analysis of the actual impact of that notion on the question of fragmentation of international law now being studied within the Commission. For that purpose, it is suggested that there are at least three distinct meanings for "regionalism" that refer specifically to international law and that should be taken into account.

2. "Regionalism" as a set of approaches and methods for examining international law

199. A first—and the most general—use of the term refers to particular orientations of legal thought and culture. It is, for example, sometimes said that there is an "Anglo-American" or a "continental" tradition of international law, although frequently the distinctiveness of such traditions is denied.[259] More recently, it has been habitual to claim that there are distinct "Soviet" doctrines or "Third World approaches" to international law.[260] To some extent, the notion of different legal cultures has been enshrined in, for example, the statute of the International Law Commission itself, as article 8 of the statute requires "that in the Commission as a whole representation of the main forms of civilization and of the principal legal systems of the world should be assured". The composition of many other international law bodies is also expected to conform to this pattern, reflected in the standard—though usually informal—practice in United Nations elections of following the principle of "equitable geographical distribution". The United Nations General Assembly has occasionally highlighted the importance of this principle, for example in 2001, when it "[*e*]*ncourage*[*d*] States parties to the United Nations human rights instruments to establish quota distribution systems by geographical region for the election of the members of the treaty bodies".[261]

200. No doubt, there have always existed regional and local approaches to, or even "cultures" of, international law, and much of the relevant literature traces their influence on general international law. Thus, for instance, there is much talk again today about the role of a "European tradition" of international law.[262] Historical studies also canvass the "American tradition of international law"[263] and debate the role of Africa or Asia in the development of international law.[264] Since the nineteenth century, the

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[257] W. G. Grewe, "The history of the United Nations", in B. Simma (ed.), *The Charter of the United Nations: A Commentary*, Oxford, Oxford University Press, 1994, p. 7.

[258] See, for example, R. B. Russell and J. E. Muther, *A History of the United Nations Charter: The Role of the United States 1940–1945,* Washington, D.C., Brookings, 1958, pp. 688–712. See also S. C. Schlesinger, *Act of Creation: The Founding of the United Nations*, Boulder, Westview, 2003, pp. 175–192.

[259] See, especially, H. Lauterpacht, "The so-called Anglo-American and continental schools of thought in international law", *British Year Book of International Law 1931*, vol. 12, p. 31. See also, for example, E. D. Dickinson, "L'interprétation et l'application du droit international dans les pays anglo-américains", *Recueil des cours de l'Académie de droit international de La Haye, 1932-II*, vol. 40, p. 305.

[260] A. Anghie and B. S. Chimni, "Third World approaches to international law and individual responsibility in internal conflicts", in S. R. Ratner and A.-M. Slaughter, *The Methods of International Law,* Washington, D.C., American Society of International Law, 2004, p. 185. On "Soviet" and "Russian" doctrines, see K. Grzybowski, *Soviet Public International Law: Doctrines and Diplomatic Practice*, Leiden, Sijthoff, 1970; T. Långström, *Transformation in Russia and International Law*, Leiden, Martinus Nijhoff, 2003.

[261] General Assembly resolution 56/146 of 19 December 2001, para. 1.

[262] See especially the series of symposia on the "European tradition in international law" in EJIL since 1990.

[263] See, for example, M. W. Janis, *The American Tradition of International Law: Great Expectations 1789–1914*, Oxford, Clarendon Press, 2004.

[264] See T. O. Elias, *Africa and the Development of International Law*, Leiden, Sijthoff, 1972; R. P. Anand, "The role of Asian States in the development of international law", in R.-J. Dupuy (ed.), *The Future of International Law in a Multicultural World*, The Hague, Martinus Nijhoff, 1983, p. 105. Many articles in the *Journal of the History of International Law*, published since 1999, have been geared towards examining regional influences and developments in a historical way.

special nature and influence of Latin America on international law has often been stressed.[265]

201. It is no doubt possible to trace the sociological, cultural and political influence that particular regions have had on international law. However, these studies do not really address the issue of fragmentation. They do not claim that some rules should be read or used in a special way because of their having emerged as a result of "regional" inspiration. On the contrary, these regional influences appear significant precisely because they have lost their originally geographically limited character and have come to contribute to the development of universal international law. They remain historical and cultural sources or more or less continuous political influences behind international law.

202. There is a very strong presumption among international lawyers that, notwithstanding such influences, the law itself should be read in a universal fashion. As Sir Robert Jennings pointed out in 1987:

> the first and essential general principle of public international law is its quality of universality; that is to say, that it be recognized as a valid and applicable law in *all* countries, whatever their cultural, economic, socio-political, or religious histories and traditions.[266]

203. And yet, as Jennings himself notes,

> this is not to say, of course, that there is no room for regional variations, perhaps even in matters of principle. … Universality does not mean uniformity. It does mean, however, that such a regional international law, however variant, is a part of the system as a whole and not a separate system, and it ultimately derives its validity from the system as a whole.[267]

204. If regionalism itself thus is not automatically of normative import, its significance is highlighted as it mixes with functional differentiation. That is to say, where previously the moving forces behind international law may have been geographical regions, today those forces are often particular interests that are globally diversified: trade interests, globalization lobbies, environmentalist or human rights groups and so on. The language of the "Third World" already reflected this change. Although the States in this group are sometimes identified in geographic terms—*e.g.* as "the South"—this is not intended to refer to a special geographical property (such as climate, for example) that they share but to a certain homogeneity based on a convergence of interests, values or political objectives. Functional differentiation—the emergence of special types of law that seek to respond to special types of ("functional") concern, such as "human rights law" or "environmental law", etc.—is certainly at the (sociological) root of the phenomenon of fragmentation and diversification of international law. This, however, is covered in other parts of this report and need not be specifically discussed here.

3. "Regionalism" as a technique for international law-making

205. A second sense of the term "regionalism" is that of a privileged forum for international law-making. It is often assumed that international law is or should be developed in a regional context because the relative homogeneity of the interests or outlooks of actors will ensure a more efficient or equitable implementation of the relevant norms. The presence of a coherent cultural community better ensures that the regulations enjoy legitimacy and that they are understood and applied in a coherent way. This is probably the reason why human rights regimes and free trade regimes have always commenced in a regional context, despite the universalist claims of ideas about human rights or commodity markets.

206. This is an aspect of the general argument in favour of contextualization and has already been discussed in the section on *lex specialis* above: closeness to context better reflects the interests and consent of the relevant parties. As a matter of legal policy, it may often be more efficient to proceed by way of a regional approach.[268] Both human rights and economic integration constitute examples of this type of reasoning. More broadly, regionalism emerges sometimes in connection with sociological theories about international law, especially views that emphasize a natural tendency of development from States to larger units of international government.

207. In the sociological ("objectivist") theory of international law presented by Georges Scelle, for example, regionalism appears as an incident of what he called the "federal phenomenon", a process leading from the individual State to larger normative units gradually and in successive stages as a result of expanding circles of "solidarity". This may happen, he wrote, as a result of natural affinities between neighbouring States (common history, language, religion, *etc.*) but also through the need for division of labour (as in regional economic integration) or in view of a common threat (as through the development of systems of regional security).[269] More recently, theories of interdependence and international regimes in international relations studies, as well as the sociology of globalization, point to the advantages of governance through units wider than States, including regional units.

208. Such studies have given rise to varying political assessments. Hedley Bull, for instance, points to the attractions of Third World regionalism: it has the

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[265] See *Asylum Case (Colombia/Peru)*, Judgment, *I.C.J. Reports 1950*, p. 266, at pp. 293–294 (dissenting opinion of Judge Álvarez). For an overview of the nineteenth-century debates, see H. Gros Espiell, "La doctrine du droit international en Amérique Latine avant la première conférence panaméricaine", *Journal of the History of International Law*, vol. 3 (2001), p. 1. See also L. Obregón, *Completing Civilization: Nineteenth Century Criollo Interventions in International Law*, unedited doctoral thesis, Harvard University, 2002. The main advocate of this idea in the twentieth century was undoubtedly Alejandro Álvarez. See, for example, his "Latin America and international law", AJIL, vol. 3, No. 2 (April 1909), p. 269.

[266] R. Y. Jennings, "Universal international law in a multicultural world", in M. Bos and I. Brownlie (eds.), *Liber Amicorum for the Rt. Hon. Lord Wilberforce*, Oxford, Clarendon Press, 1987, p. 39, at pp. 40–41; also published in *Collected Writings of Sir Robert Jennings*, vol. 1, The Hague, Kluwer Law International, 1998, p. 341.

[267] Jennings, "Universal international law in a multicultural world", in *Liber Amicorum…* (see footnote 266 above), p. 41; see also *Collected Writings…*, p. 342.

[268] For one rather thorough overview of regional cooperation between African, American, former socialist and Western European States, together with a discussion of the regional commissions of the United Nations and regional development banks, see Bernhardt (ed.), *Encyclopedia of Public International Law,* vol. 4 (footnote 130 above), pp. 100–161.

[269] Scelle (see footnote 70 above), p. 253.

advantages of functionality and solidarity for weak States and it may be used to avoid the danger of great Power domination that may result from participating in global or otherwise wider spheres of cooperation.[270] Other theorists, for their part, have taken exactly the opposite view and have seen regionalism as an instrument of hegemony. In this view, regionalism would often signify the creation of large spaces or hegemonic "blocs"—the Monroe doctrine might perhaps serve as an example—by a great Power in order to ensure supremacy or to redress the balance of power disturbed by the activities of another Power elsewhere in the world.[271]

209. There is of course an enormous amount of writing on the nature, advantages and disadvantages of regionalism as an instrument of the politics of cooperation and hegemony.[272] It is, however, doubtful whether such sociological views and historical speculations—whatever their merits—have much to contribute to an examination of the fragmentation of international law. They, too, tend to see regional cooperation from a functional perspective, as a particular case of the more general need for States either to collaborate for the attainment of common aims or to enlist partners so as to create, maintain or oppose hegemony. As an incident of theories about the logic of cooperation and rational choice, regionalism loses its specificity as a problem and should be dealt with rather in connection with the functional diversification of international society in general, in particular the problem of special regimes covered in the previous section of this report.

210. Nevertheless, one aspect deserves mention here: regionalism in regard to trade law. Despite the strong pull for a global trade regime within the GATT/WTO system, the conclusion of regional trade agreements (RTAs) has not diminished—on the contrary. During the last stages of the Uruguay Round, in 1990–1994, for example, the GATT secretariat was notified of 33 RTAs, while in the period between January 2004 and February 2005 the total was no less than 43 RTAs, "making it the most prolific RTA period in recorded history".[273] Technically speaking, while such agreements obviously liberate trade between their partners, they also limit trade with the outside world. The specific justification for RTAs is found in article XXIV of GATT, and, although there has been endemic controversy about the scope of this provision, the (understandable) view within the WTO system, as articulated by the WTO Appellate Body, has been to interpret it restrictively.[274] Nevertheless, in view of the difficulties and controversies in developing a universal trade system, there appears presently to be no end in sight to the conclusion of RTAs.

4. "Regionalism" as the pursuit of geographical exceptions to universal international law rules

211. But regionalism may have a stronger sense if it is meant to connote a rule or a principle with a regional sphere of validity, or a regional *limitation* to the sphere of validity of a universal rule or principle. In the former (positive) sense, the rule or principle would be binding only on States identified as members of a particular region.[275] In the latter (negative) sense, regionalism would exempt States within a certain geographical area from the binding force of an otherwise universal rule or principle.

212. There are many problems in such suggestions, not least of which is the identification of the relevant "region" and especially the imposition of that identification on a State not sharing it. For *normative* regionalism must be clearly distinguished from the regular case of a multilateral treaty between States in a region or a set of converging practices among States that amount to a regional custom. In the latter two cases the conventional or customary rule becomes binding on the relevant States on the basis of their consent to it. The fact that the States come from the same region is only a factual ingredient of their relationship and of no greater consequence to the binding force or interpretation of that rule than their ethnic composition or economic system.[276] Instead of illustrating the independently normative power of regional linkages, these cases come under the discussion of *lex specialis* above.[277]

213. A separate, much more difficult case is the one where it is alleged that a regional rule (either on the basis of treaty practice or custom) is binding on a State even when the State has not specifically adopted or accepted it. This is the claim dealt with (albeit inconclusively) by the International Court of Justice in the *Asylum* (1950) and *Haya de la Torre* (1951) cases. Here, Colombia argued *inter alia* that there had emerged an "American" or a "Latin American" law concerning the matter of

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[270] H. Bull, *The Anarchical Society: A Study of Order in World Politics*, London, Macmillan, 1977, pp. 305–306. For a consideration of the advantages and disadvantages of regional security "complexes", situated in a mid-level between States and global security systems, see, for example, B. Buzan, *People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era*, 2nd ed., New York, Harvester, 1991, pp. 186–229. For the mutually reinforcing but also challenging forces of economic globalization and regionalization, see, for example, C. Oman, "Globalization, regionalization and inequality", in A. Hurrell and N. Woods (eds.), *Inequality, Globalization, and World Politics*, Oxford, Oxford University Press, 1999, p. 36.

[271] See, in particular, C. Schmitt, *Der Nomos der Erde im Völkerrecht des Jus Publicum Europaeum*, Cologne, Greven, 1950. To the same effect, see W. G. Grewe, *The Epochs of International Law*, Berlin, Walter de Gruyter, 2000, pp. 458 *et seq.*

[272] See, for example, R. A. Falk and S. H. Mendlowitz (eds.), *Regional Politics and World Order,* San Francisco, Freeman, 1973; W. Lang, *Der internationale Regionalismus: Integration und Desintegration von Staatenbeziehungen in weltweiter Verflechtung*, Springer, Vienna, 1982; and the essays collected in J. S. Nye, *International Regionalism: Readings*, Boston, Little, Brown and Company, 1968.

[273] F. Weiss, "Coalitions of the willing: the case for multilateralism *vs.* regional and bi-lateral arrangements in world trade", in C. Calliess, G. Nolte and P.-T. Stoll (eds.), *Coalitions of the Willing: Avant-garde or Threat?*, Cologne, Carl Heymanns, 2007, p. 65 (forthcoming). See also chapter III, section D.1 (*a*), below.

[274] See *Turkey—Restrictions on Imports of Textile and Clothing Products* (footnote 88 above), para. 9.92.

[275] This is the understanding in, for example, D. Schindler, "Regional international law", in Bernhardt (ed.), *Encyclopedia of International Law*, vol. 4 (see footnote 130 above), pp. 161–165.

[276] This does not of course mean that it would be of no consequence at all. In the *Haya de la Torre* case, for instance, the International Court of Justice felt entitled to interpret article 2 of the Convention Fixing the Rules to be Observed for the Granting of Asylum "in conformity with the Latin-American tradition in regard to asylum" (*Haya de la Torre Case*, Judgment of 13 June 1951, *I.C.J. Reports 1951*, p. 71, at p. 81).

[277] Many regional organizations are like this. Their "regional" character does not distinguish them from other multilateral organizations. This means, for instance, that not all States of the relevant region always participate in them and that their competence does not even, in such a case, extend to the non-participating ones. See Schindler (footnote 275 above), p. 161.

diplomatic asylum.[278] According to Judge Álvarez, this had been based on the "wish" of Latin American States "since their independence" to "modify [international] law so as to bring it into harmony with the interests and aspirations of their continent".[279] Here, both the purpose of and the justification for regionalism are clearly outlined: the purpose is to *deviate* from the general law, while the justification for this is derived in part from consent ("wish") and in part from a sociological argument about regional appropriateness. The normative force of this law was as clear to Colombia as it was to Álvarez. A regional law was applicable, in the Colombian view, even to States of the region that did not accept it.[280] Álvarez, too, argued not only that it was "binding upon all the States of the New World", as well as on all other States, "in matters affecting America",[281] but also that it was "binding upon all the States of the New World" though it "need not be accepted by all [of them]".[282]

214. The question of regionalism has often arisen in connection with rules alleged to have a specifically South American origin or sphere of applicability, such as the famous Calvo, Drago and Tobar doctrines.[283] Nevertheless, none of these doctrines has ever received general endorsement, and their importance today seems doubtful. In the *Asylum* case, the Court itself did not specifically pronounce on the conceptual possibility of there being specifically regional rules of international law in the above, strong sense (*i.e.* rules binding automatically on States of a region and binding others in their relationship with those States).[284] It merely stated that the cases cited by Colombia in favour of the existence of a regional rule of diplomatic asylum may have been prompted by considerations of convenience or political expediency. No evidence had been produced that they would have arisen out of a feeling of legal obligation.[285] The more important point, however, is perhaps that the Court treated the Colombian claim as a claim about customary law and dismissed it in view of Colombia's failure to produce the required evidence. There was, in other words, no express discussion of "regionalism" in the judgment, much less an endorsement of regionalism in the "strong" sense outlined above.

215. In fact, there is very little support for the suggestion that regionalism would have a normative basis in anything apart from regional customary behaviour, accompanied, of course, by the required *opinio juris* on the part of the relevant States. In such a case, States outside the region would not be automatically bound by the relevant regional custom unless there were a specific indication that they might have accepted this either expressly or tacitly (or perhaps by way of absence of protest). This would also render any specific normative (in contrast to historical, sociological or technico-legislative) debate about regionalism superfluous. However, two specific issues might still need to be singled out.

216. One is the question of the universalism *versus* regionalism opposition in human rights law. Although this goes deep into the philosophical question of cultural relativism—and as such falls outside the scope of the Commission's project on fragmentation—one approach to it might be noted. This is to think of "regionalist challenges" not in terms of exceptions to universal norms but, as Andrew Hurrell has put it, "principally in terms of implementation".[286] This would mean understanding regional variation in terms not of exceptions but of the varying, context-sensitive implementation and application of shared standards. If so, then this matter, too, would fall under the more general question of the relationship between general and special law, no different from the general problem of the applicability and limits of *lex specialis*.

217. Another instance concerns the question of the relationship between universalism and regionalism within the collective United Nations security system or, in other words, the relationship between Chapters VII and VIII of the Charter of the United Nations. Here, open questions have included the definition of what may count as regional "arrangements" or "agencies", as well as when may action be "appropriate" under Article 52, paragraph 1. The most important question, however, appears to concern the priority of competence between regional

[278] See, in particular, *Asylum Case (Colombia–Peru)*, "Réplique du gouvernement de la République de Colombie (20 IV 50): Observations sur l'existence du droit international américain", *I.C.J. Pleadings 1950*, vol. I, pp. 330–334, paras. 25–32.

[279] *Asylum Case (Colombia–Peru)*, Judgment of 20 November 1950 (see footnote 265 above), p. 293 (dissenting opinion of Judge Álvarez). Likewise, Judge Read, in his dissenting opinion, pointed to the existence of a "body of conventional and customary law, complementary to universal international law, and governing inter-State relations in the Pan American world" (*ibid*., p. 316).

[280] *Haya de la Torre Case*, "Mémoire présenté au nom du Gouvernement de la République de Colombie (7 II 51)", *I.C.J. Pleadings 1951*, pp. 25–27.

[281] "Universal international law thus finds itself today within the framework of continental and regional law; and all such legal systems adopt new trends in accordance with those indicated in the preamble and Chapter I of the United Nations Charter; such trends reflect entirely American, international spirit" (*Asylum Case (Colombia–Peru)*, Judgment of 20 November 1950 (see footnote 265 above), p. 294 (dissenting opinion of Judge Álvarez)).

[282] *Ibid*.

[283] Under one version of the Calvo doctrine, international liability with respect to contracts entered into with alien private contractors by the State party is excluded. Another formulation describes it as a stipulation in a contract in which "an alien agrees not to call upon his State of nationality in any issues arising out of the contract". This used to be inserted (or suggested) as a clause in investment contracts, but it has also been argued as a specific rule of South American regional law. See, for example, O'Connell, *International Law* (footnote 78 above), vol. II, pp. 1059–1066, and E. Jiménez de Aréchaga, "International responsibility", in M. Sørensen (ed.), *Manual of Public International Law*, London, Macmillan, 1968, pp. 590–593. For its (contested) relevance today, see C. K. Dalrymple, "Politics and foreign direct investment: the Multilateral Investment Guarantee Agency and the Calvo clause", *Cornell International Law Journal*, vol. 29, No. 1 (1996), p. 161, and D. Manning-Cabrol, "The imminent death of the Calvo clause and the rebirth of the Calvo principle: equality of foreign and national investors", *Law and Policy in International Business*, vol. 26 (1995), p. 1169. The Drago doctrine sought to exempt State loans from general rules of State responsibility: O'Connell, *International Law* (see footnote 78 above), vol. II, pp. 1003–1004. The Tobar doctrine, again, has to do with the alleged duty of non-recognition of governments that have arisen to power by non-constitutional means: *ibid.*, vol. I, p. 137.

[284] Though it did hint in this direction by referring to "one of the most firmly established traditions of Latin America, namely, non-intervention" (*Asylum Case (Colombia–Peru)*, Judgment of 20 November 1950 (see footnote 265 above), p. 285).

[285] *Ibid.*, pp. 276–277.

[286] A. Hurrell, "Power, principles and prudence: protecting human rights in a deeply divided world", in T. Dunne and N. J. Wheeler (eds.), *Human Rights in Global Politics*, Cambridge, Cambridge University Press, 1999, p. 277, at pp. 294–297.

agencies or arrangements and the Security Council to take enforcement action.[287] Under Article 52, paragraph 2, the members of regional agencies or arrangements must make every effort to settle their disputes before submitting them to the Security Council. Whatever the disagreements over the right marching order here, it seems evident that action by a regional agency or arrangement cannot be considered an "exception" to the competence of the Security Council, which at all times may be seized of an issue if it feels it appropriate to do so because, for example, regional action has not been or is not likely to be "appropriate" or effective. In this regard, Chapter VIII should be seen as a set of functional provisions that seek the most appropriate level for dealing with particular matters, with due regard to issues of "subsidiarity".[288]

5. European integration

218. Finally, a brief mention should be made of the European Union. As is well known, the European Union began as a customs union with the conclusion, in 1957, of the Treaty establishing the European Economic Community. Since then, the founding treaties have been amended several times, so that the instrument presently in force—the Treaty on European Union (done at Maastricht in 1992 and amended in Amsterdam in 1997 and Nice in 2001)—goes way beyond an economic arrangement. The Union's activities are said to consist of three "pillars", one dealing with the most heavily supranational rules on "Community" activities and the other two with the more "intergovernmental" fields of common foreign and security policy and cooperation in justice and internal affairs. European integration has profoundly transformed the nature of the legal relations between European Union members. As the European Court of Justice famously pointed out, the founding treaties are more than international agreements—they are a kind of "constitutional charter" of the European Union.[289] They have set up a special kind of legal order between the member States, and thus they are interpreted and applied in a manner that does not necessarily correspond to the way "ordinary" agreements are interpreted and applied.

219. There is no reason to dwell on the special nature of the legal relations between European Union members. One phenomenon that does contribute to fragmentation is the way the Union as an international actor is present in a number of different roles on the international scene. First, the European Community, acting under the "first pillar" of European Union competences, is a subject of international law and for practical purposes may be treated by the outside world as an intergovernmental organization, with whatever modification its specific nature brings to that characterization.[290] At the same time, especially when dealing with foreign policy matters, as well as cooperation in justice and home affairs, the European Community acts alongside its member States. The distinction between matters of exclusive European Community competence and shared competences between the European Union and member States is an intricate part of European Community law that is often very difficult to grasp. This is particularly so in regard to "mixed agreements", to which both the Community and the member States are parties but under which their respective competences develop as a function of the development of (internal) European Community law.[291] It has, of course, been stressed on the part of the European Union that none of this will have any effect on the rights of third States—and indeed, no such effect could ensue from legal developments that, from the perspective of the latter, are strictly *inter alios acta*. Nevertheless, the question of divided competences remains a matter of some concern from the perspective of the coherence of treaty rights and obligations, including responsibility for any breach that may occur. One particular aspect of European Community action—the so-called "disconnection clauses"—bears a direct linkage to the 1969 Vienna Convention and will therefore be discussed separately in chapter III below.

E. Conclusion on conflicts between special law and general law

220. All legal systems are composed of rules and principles with greater and lesser generality and speciality in regard to their subject matter and sphere of applicability. Sometimes they will point in different directions, and if they do it is the task of legal reasoning to establish meaningful relationships between them so as to determine whether they could be applied in a mutually supportive way or whether one rule or principle should have definite priority over the other. This is what in chapter V below will be called "systemic integration".

221. In addition to special primary rules, many rule systems also contain special secondary rules having to do with responsibility or settlement of disputes. Although these institutions are sometimes called "self-contained", they are never "clinically isolated" from the rest of the law. In fact, as we have seen, they owe their validity to, derive their limits from and are constantly complemented by legal rules and principles neither established by them nor incorporated into them by any specific act. Nor has the sociological phenomenon of "regionalism" meant the emergence of isolated legal systems on a regional basis. What role specialized or regional rule complexes enjoy is a factual and historical matter that can only be ascertained on a case-by-case basis, again by bearing in mind the "systemic" nature of the law of which they all form part.

222. This section has highlighted the pragmatic role of the "speciality" and the "generality" of normative standards in the process of legal reasoning. It has stressed the *relational* character of these attributes and the way in which their specific operation is always dependent on the context in which they are applied. *To make or defend a*

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[287] For a useful overview, see W. Hummer and M. Schweitzer, "Article 52", in Simma (ed.), *The Charter of the United Nations…* (footnote 257 above), pp. 683–722.

[288] *Ibid.*, pp. 709–710.

[289] Case 294/83, *Parti écologiste "Les Verts" v. European Parliament*, judgment of 23 April 1986, *European Court Reports 1986*, p. 1339, at p. 1365, para. 23.

[290] See J. Klabbers, "Presumptive personality: the European Union in international law", in M. Koskenniemi (ed.), *International Law Aspects of the European Union*, The Hague, Kluwer Law International, 1998, p. 231.

[291] For a useful analysis, see J. Heliskoski, *Mixed Agreements as a Technique for Organizing the International Relations of the European Community and its Member States*, The Hague, Kluwer Law International, 2001.

claim of "speciality" is only possible in "general" terms. In this regard, the fragmentation of the substance of international law—the object of this study—does not pose any very serious danger to legal practice. It is as normal a part of legal reasoning to link rules and rule systems with each other as it is to separate them and to establish relationships of priority and hierarchy among them. The emergence of new "branches" of law or novel types of treaties or clusters of treaties is a feature of the social complexity of a globalizing world. If lawyers feel unable to deal with this complexity, this is not a reflection of problems in their "tool box" but in their imagination about how to use it.

Chapter III

Conflicts between successive norms

223. The relationship between special law and general law is often transected by another relationship, namely that between prior and subsequent law, and it may in such cases be hard to say whether this modifies the operation of the *lex specialis* principle in any of its many permutations. Generally speaking, it may often be the case that, when States enact a subsequent general law, this is intended to set aside the prior law, even if the prior law were in some sense more "special". Again, it seems inadvisable to lay down any general rule in regard to how to manage the two types of relationship.

224. The most basic case is the adoption of a treaty in an area that was previously covered by customary law: "it is well understood that, in practice, rules of [general] international law can, by agreement, be derogated from in particular cases or as between particular parties".[292] However, as explained in chapter II above, this does not automatically mean the full extinction of that prior customary law.[293] It will normally remain valid for those States that have not become parties to the (codifying) treaty and may occasionally be applicable also between treaty partners if, for one reason or another, the treaty remains inapplicable or covers the subject matter only partially.[294] Nor does the fact that agreements often set aside prior customary law translate into any automatic presumption in favour of later law. In fact it would be wrong to assume that there is a stark opposition between custom and treaty. On the one hand, treaties may be part of the process of the creation of customary law.[295] On the other hand, customary behaviour undoubtedly affects the interpretation and application of treaties and may, in some cases, modify treaty law.[296] Because, as explained above, there is no general hierarchy of sources in international law, the relationship between a particular treaty and a particular customary norm will always remain to be decided on a case-by-case basis.[297]

225. Nevertheless, alongside the *lex specialis* maxim, the principle that "later law supersedes earlier law", or *lex posterior derogat legi priori*, has been often listed as a principle of interpretation or conflict resolution in international law.[298] The maxim has its roots in Roman law and is recognized by various early writers (*e.g.* Grotius and de Vattel).[299] It has sometimes been regarded as a "general principle of law recognized by civilized nations" under Article 38, paragraph 1 (*c*), of the Statute of the International Court of Justice[300] and sometimes as a customary law principle of interpretation.[301] Occasionally it has been envisaged as a technique that the legal mind is drawn to in its search for domestic analogies in legal procedure.[302] Yet often, as with *lex specialis*, caution has been voiced against any assumption that it could be applied in an automatic way. Schwarzenberger describes it as a non-normative "maxim" that points to one result achieved through

[292] *North Sea Continental Shelf* (see footnote 95 above), p. 42, para. 72. See also *Continental Shelf (Tunisia/Libyan Arab Jamahiriya)* (footnote 97 above), p. 38, para. 24.

[293] See, especially, H. Thirlway, *International Customary Law and Codification: An Examination of the Continuing Role of Custom in the Present Period of Codification of International Law,* Leiden, Sijthoff, 1972, pp. 95–108. See also Zemanek, "The legal foundations of the international system…" (footnote 31 above), pp. 220–221.

[294] In the words of the International Court of Justice, "customary international law continues to exist and to apply, separately from international treaty law, even where the two categories of law have an identical content" (*Military and Paramilitary Activities in and against Nicaragua,* Merits, Judgment of 27 June 1986 (see footnote 51 above), p. 96, para. 179). This situation is also presupposed by article 43 of the 1969 Vienna Convention, which provides that denouncing a treaty has no effect on an obligation that is binding on the State "independently of the treaty". Again, however, it is dangerous to generalize. The situation cannot be excluded *a priori* where it is the intention of the parties to a convention specifically to abrogate the prior custom in their relations *inter se*.

[295] *North Sea Continental Shelf* (see footnote 95 above), p. 41, para. 71.

[296] This case is presumed in a minimal way by article 31, paragraph 3 (*b*), which obliges the interpreter to have regard to the subsequent practice of treaty parties. Another case is that of intertemporal law (see chap. V, sect. D.3, below), in which subsequent custom affects the interpretation of the open-ended or "mobile" terms of the treaty. See further M. Byers, *Custom, Power and the Power of Rules: International Relations and Customary International Law*, Cambridge, Cambridge University Press, 1999, pp. 172–180; Villiger (footnote 77 above), pp. 295–297.

[297] This means, among other things, that, although treaty and custom may often link to each other as "special" and "general", this may not always be so. A particular (or bilateral) custom may of course be *in that respect* more particular than a multilateral treaty. See M. Akehurst, "The hierarchy of the sources of international law", *British Year Book of International Law 1974–1975*, vol. 47, No. 1, p. 273, at p. 275.

[298] Q. Wright, "Conflicts between international law and treaties", AJIL, vol. 11, No. 3 (July 1917), p. 579; Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), p. 150; Jenks (see footnote 8 above), pp. 445–446; Akehurst (see footnote 297 above), p. 273; Czapliński and Danilenko (see footnote 74 above), pp. 19–22; Sinclair (see footnote 63 above), p. 98; Karl (see footnote 130 above), pp. 937–938; Aust, *Modern Treaty Law…* (see footnote 74 above), p. 201; Pauwelyn, *Conflict of Norms…* (see footnote 21 above), pp. 335–363; Daillier and Pellet, *Droit international public* (see footnote 74 above), p. 270; Wolfrum and Matz, *Conflicts in International Environmental Law* (see footnote 22 above), pp. 152–158.

[299] Papinian, Dig. 50, 17, 80; Paul, Dig. 32, 66, 5 and Dig. 1, 4, 1, *The Digest of Justinian*, vol. IV (see footnote 58 above); Grotius (see footnote 64 above), book II, chap. XVI, sect. XXIX, p. 428; de Vattel (see footnote 67 above), book II, chap. XVII, para. 315.

[300] See, for example, Aufricht (footnote 118 above), p. 655.

[301] Fitzmaurice and Elias, *Contemporary Issues…* (see footnote 74 above), p. 322.

[302] The domestic analogy is expressly drawn in, for example, S. Bastid, *Les traités dans la vie internationale: Conclusion et effets,* Paris, Économica, 1985, p. 161. Likewise, Czapliński and Danilenko (see footnote 74 above), p. 21.

the normal interpretation of two treaties, in particular that the subsequent (or prior) treaty is held to prevail over its rival because that is what the parties had intended.[303]

226. As with *lex specialis*, it is easy to accept the pragmatic rationale of *lex posterior*, irrespective of its formal status. Preferring today over yesterday, it reflects more concretely present circumstances and the present will of the relevant actors. And yet, of course, it cannot claim absolute priority. Notwithstanding any issue of *jus cogens*, it may often seem unacceptable to allow later commitments to override earlier ones—especially if those later commitments are to different parties or have different beneficiaries than the early commitments.[304] Here, as elsewhere, the tendency to pragmatism, *ad hoc* decisions and harmonization prevails.[305]

227. Perhaps this is why abstract or doctrinal treatments of successive treaties tend to regard it as a "particularly obscure aspect of the law of treaties".[306] The problems are not diminished by the scarcity of judicial or arbitral practice and the tendency to resolve treaty conflicts by diplomatic negotiation.[307] The obscurities relate both to the normative import of the principle—how powerful is it?—and to its consequences—what happens when it purports to override another rule? Sometimes it may be frankly overridden by its opposite, *lex prior*. As will be seen below, these obscurities did not disappear with the adoption of article 30 of the 1969 Vienna Convention. Trying to clarify the matter is important, as conflicts between earlier and later treaties gain importance with the constant increase in multilateral treaty law, which is often of a quasi-legislative character, for example in the environmental sphere.[308]

A. General law on conflicts between earlier and later treaties

228. Today, the question of conflicts between earlier and later treaties is covered by articles 30 and 41 of the 1969 Vienna Convention. However, as will be seen later, the Convention leaves many questions open and frequently only refers to the general law. In any case, the rules now enshrined in the Convention largely codify the general law approaches that existed prior to its conclusion and that continue to provide both the rationale for those conventional provisions and the perspective from which they are applied. It is therefore useful to deal with the general law of conflict between earlier and subsequent treaties separately. Here, two basic situations should be distinguished: the one in which the parties to the two treaties are identical and the one where there are non-identical parties.

1. Conflict between treaties with identical parties

229. When two States have concluded two treaties on the same subject matter, but have said nothing of their mutual relationship, it is usual to first try to read the two treaties as compatible (the principle of harmonization).[309] This may often be undertaken by a simple examination of party intent, drawn from the various available readings of the treaty texts.[310]

230. If no such harmonizing intent may be gleaned from the texts, the *lex posterior* maxim may be turned to as a presumption of intent to derogate from the earlier agreement.[311] This may be the case, for example, when the treaties deal with wholly different topics and were negotiated by officials from different administrations.[312] Yet of course, the presumption is rebuttable, so that, if interpretation really indicates that the parties did not wish to derogate from the earlier agreement, then that intent should prevail over the maxim. In the treatment of the matter by the Commission in the context of its debates on the law of treaties, for example, it was clear that, in the absence of a conflict clause, the issue of priority was to be resolved by interpreting the will of the parties: had they intended that the latter treaty should supplement or derogate from the earlier?[313]

231. The same considerations also apply to the relationship between multilateral treaties with identical parties. That is to say, there is an effort at harmonization through interpretation, unless it appears that the parties wanted to replace the earlier treaty by the later. Article 59 of the 1969 Vienna Convention expressly provides that:

> A treaty shall be considered as terminated if all the parties to it conclude a later treaty relating to the same subject-matter and:
>
> (*a*) It appears from the later treaty or is otherwise established that the parties intended that the matter should be governed by that treaty; or
>
> (*b*) The provisions of the later treaty are so far incompatible with those of the earlier one that the two treaties are not capable of being applied at the same time.

232. However, though the case of two treaties with identical parties is in principle easy, there might still be complications. For instance, there is the question of which of the agreements is the earlier one. Many authors, including the Expert Consultant at the United Nations Conference on the Law of Treaties, Sir Humphrey Waldock,

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[303] Schwarzenberger (see footnote 80 above), p. 473.

[304] The concurrent pragmatic validity of both the *lex posterior* and the *lex prior* maxims may follow from the way the two derive from different domestic analogies. Where *lex posterior* projects international rules as analogous to domestic legislation (later laws regularly overruling earlier ones), the *lex prior* suggests an analogy to domestic contracts (as expressly suggested by Lauterpacht). See also Borgen (footnote 10 above), pp. 620–639.

[305] Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), p. 153.

[306] Sinclair (see footnote 63 above), p. 93.

[307] Binder (see footnote 145 above), p. 17; Borgen (see footnote 10 above), pp. 591–600, 609–620.

[308] See, especially, Wolfrum and Matz, *Conflicts in International Environmental Law* (footnote 22 above), pp. 1–13; Matz, *Wege zur Koordinierung völkerrechtlicher Verträge…* (footnote 22 above), pp. 53–73; Fitzmaurice and Elias, *Contemporary Issues…* (footnote 74 above), pp. 321–348.

[309] Czapliński and Danilenko (see footnote 74 above), p. 13; Schwarzenberger (see footnote 80 above), p. 474; Aust, *Modern Treaty Law…* (see footnote 74 above), p. 174; Pauwelyn, *Conflict of Norms…* (see footnote 21 above), pp. 240–244. See also Jenks (footnote 8 above), pp. 427–429.

[310] See also Borgen (footnote 10 above), p. 583.

[311] Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), pp. 188–190; Aufricht (see footnote 118 above), p. 657; Mus (see footnote 21 above), p. 220; Aust, *Modern Treaty Law…* (see footnote 74 above), p. 174.

[312] Borgen (see footnote 10 above), p. 583.

[313] See the discussion in Mus (footnote 21 above), pp. 217–218; Fitzmaurice and Elias, *Contemporary Issues…* (footnote 74 above), pp. 321–322.

have argued that the critical date in determining the timeline (earlier/subsequent) is that of the date of the adoption of the treaty and not, for example, its ratification or entry into force, at least unless nothing else appears from the context.[314] Minority opinions support either the date of entry into force or discerning the intention of the parties.[315] A further complication is caused by the possibility that the matter is resolved differently in regard to different States. For instance, State A might have concluded treaty X before treaty Y, while State B, for its part, might have become party to Y only after having ratified X.[316]

233. Also, there is the question of the relationship between *lex posterior* and *lex specialis*. Jenks has pointed out that neither of these principles "can be regarded as of absolute validity. There are a number of principles and rules which must be weighed and reconciled in the light of the circumstances of the particular case."[317] In the *Mavrommatis Palestine Concessions* case (1924), the Permanent Court of International Justice applied both *lex specialis* and *lex posterior* together, without establishing a hierarchy between them. On the issue of the relationship between the Mandate for Palestine of 1922 and Protocol XII to the Treaty of Lausanne of 1923, the Court merely stated that "in cases of doubt, the Protocol, being a special and more recent agreement, should prevail".[318] The question boils down to an assessment of which aspect—"speciality" or "temporality"—seems more important in this connection. Sometimes it may not be necessary to take a stand on this at all, and tribunals have occasionally ignored both principles.[319]

2. Conflict between treaties with non-identical parties

234. This is the really problematic aspect of this matter, not least because it often involves matters of great importance—the breaking of political or military alliances, the conclusion of separate peace treaties, *etc*.[320] Rousseau, for example, begins his 1932 discussion of treaty conflict by noting that there was no more pressing legal question at that time. He was thinking about the relationship between the Covenant of the League of Nations and the 1928 General Treaty for Renunciation of War as an Instrument of National Policy (the Kellogg–Briand Pact or Pact of Paris), the neutrality agreements of League of Nations members, and the then recent decision by the Permanent Court of International Justice in the controversial *Austro-German Customs Union* case, where the Court had, by a narrow margin, concluded that the projected union was incompatible with Austria's obligations under the 1922 Geneva Protocol No. 1.[321] The textbook example discussed by classical lawyers (Gentili, Grotius, de Vattel) was that of a war between two parties in a three-party alliance—which of the two belligerents should the third assist? During the Cold War, members of the two blocs occasionally accused each other of such violations.[322]

235. More recently, the question of the relationship between earlier and later treaties has arisen in the context of what Sir Humphrey Waldock called "chains of multilateral treaties dealing with the same subject-matter".[323] The very wide scope of legislative activity by global and regional organizations has led to the emergence of clusters of treaty law on particular topics, with complex relationships between particular treaties within the clusters and beyond such clusters (or "regimes"). Only with difficulty could these relationships be treated in terms of clear-cut rules. This is why "modern international law … does not approach the problem from the point of view of the validity of treaties".[324] Instead, as we will see, the matter has been addressed from the perspective of relative "priority" between treaties, with the sanction of responsibility for any obligation breached.

(a) *Lex prior*

236. Nevertheless, it has sometimes been suggested that, even without going into the question of *jus cogens,* either the earlier or the later treaty might enjoy some kind of general superiority. The superiority of the *earlier* treaty was often suggested by early natural lawyers. If a treaty was understood to have alienated the power of the State to dispose of something, then the later, inconsistent treaty became automatically void owing to lack of competence. In the matter of military alliances, Grotius, Pufendorf and de Vattel all preferred to give precedence to the most ancient ally. This seems natural in a system in which no obligation is "merely" a matter of reciprocal will; rather, it is sanctioned by an overriding objective legal system.[325]

237. More recently, the *a priori* superiority of an earlier treaty was hinted at by the International Court of Justice in the *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide* case (1951), as it stated that:

> It is … a generally recognized principle that a multilateral convention is the result of an agreement freely concluded upon its clauses and that consequently none of the contracting parties is entitled to frustrate or impair, by means of unilateral decisions or particular agreements, the purpose and *raison d'être* of the convention.[326]

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[314] Mus (see footnote 21 above), pp. 220–222; Aust, *Modern Treaty Law…* (see footnote 74 above), p. 183; Sadat-Akhavi (see footnote 21 above), pp. 75–78, and for special cases pp. 78–82.

[315] For the former, see M. Sorensen, "Le problème dit du droit intertemporel dans l'ordre international", *Annuaire de l'Institut de droit international*, vol. 55 (Session of Rome, 1973), p. 54. For the latter, see Czapliński and Danilenko (footnote 74 above), p. 19.

[316] Vierdag (see footnote 20 above), p. 102; Sadat-Akhavi (see footnote 21 above), pp. 75–82.

[317] Jenks (see footnote 8 above), p. 407; Sinclair (see footnote 63 above), p. 96.

[318] *Mavrommatis Palestine Concessions* (see footnote 87 above), p. 31.

[319] See, for example, discussion of the *Gorham* claim (1930) before the United States–Mexican General Claims Commission in Schwarzenberger (footnote 80 above), pp. 479–480. See also UNRIAA, vol. IV (Sales No. 1951.V.1), p. 640.

[320] This is the perspective in Binder (see footnote 145 above).

[321] Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), pp. 133–134, 178–187. See also *Customs Régime between Germany and Austria* (footnote 39 above), p. 36.

[322] See, in particular, Binder (footnote 145 above), pp. 24–25, 40–42. See also the examples in Bastid (footnote 302 above), pp. 162, 164.

[323] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur, *Yearbook … 1964*, vol. II, document A/CN.4/167 and Add.1–3, p. 43, para. (32) of the commentary to draft article 65.

[324] Czapliński and Danilenko (see footnote 74 above), p. 20.

[325] See Binder (footnote 145 above), pp. 40–42.

[326] *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide*, Advisory Opinion, *I.C.J. Reports 1951*, p. 15, at p. 21.

238. It is somewhat difficult to interpret the meaning of this passage. To the extent that it deals with the permissibility of *inter se* agreements, the matter will be discussed in section D below. In general terms, it seems to indicate nothing more than the self-evident notion captured by *pacta sunt servanda*. It certainly implies nothing about the validity of either the Convention on the Prevention and Punishment of the Crime of Genocide or incompatible "particular agreements". Two considerations may perhaps be offered here. First, the statement may simply be a reminder to parties that breach will be followed by State responsibility. Second, especially in the context in which it was made, it may be intended to underline the exceptional importance of the subject matter of the Convention and the seriousness of the duty to comply.[327] In that case, the argument would go some way towards suggesting the *jus cogens* or otherwise "objective" nature of the Convention.

239. The cases often mentioned in support of *lex prior* come from the beginning of the twentieth century and from the Central American Court of Justice. Costa Rica and El Salvador complained that, by concluding a treaty with the United States relating to the Panama Canal, Nicaragua had breached treaties it had earlier made with them on the same subject. The Court noted the incompatibility of the treaties and the fact that Nicaragua had violated its obligations but refrained from declaring the later treaty between Nicaragua and the United States void because the United States was not a party to the cases before it and it could not pronounce on its rights.[328]

240. Another case of apparent application of *lex prior* might relate to objective territorial regimes. This is suggested by, for example, the Permanent Court of International Justice's treatment of the *Austro-German Customs Union* case (1931), in which the Court determined—by an 8–7 vote—that the planned customs union treaty would have been incompatible with Austria's obligation under the Treaties of Versailles and Saint-Germain of 1919, as well as a related Protocol of 1922, "to abstain from any act which might directly or indirectly or by any means whatever compromise her independence".[329] Nevertheless, the Court did not spell out the consequences that might have followed from the conclusion of the planned customs union. Another case sometimes cited in this connection is the *Oscar Chinn* case (1934), in which two of the dissenting judges (van Eysinga and Schücking) suggested that the Peace Treaty of Saint-Germain of 1919 or the 1922 Protocol might be void to the extent that some of their provisions deviated from the General Act of the Conference of Berlin of 1885, as the latter had set up something like an objective regime.[330] This was a minority opinion, however. The question of the validity of the 1919 Treaty and the 1922 Protocol had not been raised by the parties, and by remaining silent on the issue the Court seemed to accept that the Berlin Act could be subjected to *inter se* modification.[331]

241. The *lex prior* principle is supported in particular by analogy with domestic contract law ("illegality of a contract to break a contract").[332] Hersch Lauterpacht, in his first report on the law of treaties, started from this position. Nevertheless, he accepted that it might in some cases lead to absurd results, especially when the later law would pertain to general application.[333] But if *lex prior* has general application in contract law, *lex posterior* has general application in public law and legislative enactments. So the relationship between the two laws reflects the way one views the nature of treaties. Both analogies, however, have their problems. As will be stressed frequently in the course of this report, the fact that the 1969 Vienna Convention treats all treaties alike obscures the many differences that actual treaties have.[334]

242. There may also be cases where a subsequent treaty affects the provisions of an earlier treaty by increasing the rights or benefits of a party thereto, typically through a most-favoured-nation clause. In the case of such clauses, subsequent treaties under which one party promises a benefit to another party to that subsequent treaty will also be extended to parties to the earlier treaty.[335]

(b) *Lex posterior*

243. As observed above, the principle that *lex posterior derogat legi priori* is well embedded in domestic jurisprudence and often cited in an international law context as well. Nevertheless, there are few cases where it would have been applied as such. It may often be more useful to refer directly to the will of the parties than to the *lex posterior* principle, to which, as also noted above, it may simply give expression. Inasmuch as it is a question of parties to a later treaty being *different* from parties to an earlier treaty, it is doubtful whether any meaningful role is left to *lex posterior*.

244. There may, however, be rare cases in which a later treaty concluded by parties different from those to

[327] See also the discussion in Schwarzenberger (footnote 80 above), pp. 483–484.

[328] *Costa Rica v. Nicaragua*, decision of the Central American Court of Justice of 30 September 1916, AJIL, vol. 11, No. 1 (January 1917), p. 181, at p. 228. See also *El Salvador v. Nicaragua*, decision of the Central American Court of Justice of 9 March 1917, AJIL, vol. 11, No. 3 (July 1917), p. 674. For a detailed discussion, see, for example, Borgen (footnote 10 above), pp. 591–594. For the Interoceanic Canal (Bryan–Chamorro) Treaty, signed at Washington, D.C., on 5 August 1914 between Nicaragua and the United States, see C. I. Bevans (ed.), *Treaties and Other International Agreements of the United States of America, 1776-1949*, vol. 10, Washington, D.C., United States Government Printing Office, 1972, p. 379.

[329] *Customs Régime between Germany and Austria* (see footnote 39 above), p. 42, article 88 of the Treaty of Saint-Germain.

[330] See Aufricht (footnote 118 above), p. 672. *Oscar Chinn* case (see footnote 138 above), separate opinion of Judge van Eysinga, p. 131, and separate opinion of Judge Schücking, p. 148.

[331] *Oscar Chinn* case (see footnote 138 above). See also the discussion in Schwarzenberger (footnote 80 above), p. 485, and in the second report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur, *Yearbook ... 1963*, vol. II, document A/CN.4/156 and Add.1–3, pp. 56–57, para. (15) of the commentary to draft article 14. See also *Jurisdiction of the European Commission of the Danube between Galatz and Braila* (footnote 108 above), p. 23 (*inter se* agreement).

[332] Jenks (see footnote 8 above), p. 442.

[333] First report on the law of treaties by Hersch Lauterpacht, Special Rapporteur (document A/CN.4/63) (see footnote 144 above), pp. 156–159.

[334] Rousseau, "De la compatibilité des normes juridiques contradictoires…" (see footnote 36 above), pp. 150–151; Borgen (see footnote 10 above), p. 599.

[335] Aufricht (see footnote 118 above), pp. 679–682.

an earlier treaty abrogates the earlier treaty. This is of course a violation of the principle that third States are not affected by something that remains *res inter alios acta*. As Aufricht points out, this is a case of an unequal (subsequent) treaty in which the inequality might relate, for example, to the great Power status of the parties to the later treaty.[336]

245. Might there be legislative treaties of this type, overriding previous treaties irrespective of any question of *jus cogens*? The *lex posterior* principle is clearly applicable in the case of instruments of revision. This is also the case for *inter se* agreements, as provided under article 41 of the 1969 Vienna Convention, of which more in section D below. But what about the case where the parties to the two treaties are different? Wilfred Jenks suggests that: "There may be great advantages in providing for the fuller application of the principle in certain fields of legislative action by conferring the necessary powers on the appropriate international bodies…".[337]

246. This matter links again to the special character of certain multilateral treaties. In an important case, the European Court of Human Rights held that the European Convention on Human Rights controlled the content and/or application of an earlier bilateral treaty, or at least determined how the latter was to be interpreted and applied by the national authorities. The issue here concerned the application of a Russian–Latvian Treaty of 1994 insofar as it concerned the deportation of certain former members of the Soviet army and their families from Latvian territory. The court examined the rights of the individuals concerned on the basis of the European Convention, to which Latvia had acceded at a later date, and concluded that

> the [Russian–Latvian] treaty cannot serve as a valid basis for depriving the Court of its power to review whether there was an interference with the applicants' rights and freedoms … and, if so, whether such interference was justified…[338]

247. That view was based on an earlier admissibility decision in which the Court had specifically noted the following:

> It follows from the text of Article 57 § 1 of the [European] Convention [on Human Rights], read in conjunction with Article 1, that ratification of the Convention by a State presupposes that any law then in force in its territory should be in conformity with the Convention…
>
> In the Court's opinion the same principles must apply as regards any provisions of international treaties which a Contracting State has concluded prior to the ratification of the Convention and which might be at variance with certain of its provisions.[339]

248. This is an important statement of principle. Under it, it seems difficult to deny that, if *lex posterior* should be read in favour of the European Convention on Human Rights, it should also favour any other later human rights treaties, if not any other later multilateral legislative treaties. Again, we are in the presence of a hierarchy that seems best dealt with by the notion of special "integral" obligations—such as obligations in human rights treaties—that enjoy some kind of precedence over merely transactional, bilateral instruments. It is hard to say, however, if this is a case of *lex specialis*, *lex posterior* or *lex superior*, and also to an extent irrelevant. The important point is that the bilateral treaty did not have a life that would be independent from its normative environment at the time of its application. The construction of the bilateral treaty by reference to the later multilateral treaty was reasonable, and little else seems pertinent.

249. Yet it is hard to generalize from this case. It highlights the normative force of human rights treaties (perhaps as "integral" or "absolute" treaties) but probably does not resolve the general question of primacy, and certainly cannot be cited as a blanket endorsement of *lex posterior*. Also, the fact that the case comes from the European Court of Human Rights, specifically assigned to apply the European Convention on Human Rights, is not irrelevant—even as it may be hard to square with the Court's willingness to yield in favour of an earlier customary rule of State immunity in the *Al-Adsani* case.[340]

250. In fact, irrespective of whatever normative power the *lex posterior* rule may enjoy (as pointed out above, that power is much greater in a legislative than in a contractual system), just like the *lex specialis*, it fails to render itself applicable in any mechanical way. Depending on the case, many other considerations may be relevant as well, including the simultaneous applicability of the "special law"/"general law" and "superior law"/"inferior law" distinctions. It is best to discuss these problems in connection with the Commission's debates on article 30 of the 1969 Vienna Convention.

B. Article 30 of the Vienna Convention on the Law of Treaties: from invalidity to responsibility

251. The general law on conflict of successive treaties fails, as we have seen, to provide definite resolution to the most important problems—at least the most important problems of *theory*—regarding the case where the parties to a later treaty are not identical with parties to an earlier one. It was clear that something needed to be said about the matter in the 1969 Vienna Convention. The matter is dealt with in article 30 of the Convention which, however, is only residual.[341]

Article 30. Application of successive treaties relating to the same subject-matter

1. Subject to Article 103 of the Charter of the United Nations, the rights and obligations of States parties to successive treaties relating to the same subject-matter shall be determined in accordance with the following paragraphs.

2. When a treaty specifies that it is subject to, or that it is not to be considered as incompatible with, an earlier or later treaty, the provisions of that other treaty prevail.

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[336] *Ibid.*, pp. 673–674.

[337] Jenks (see footnote 8 above), p. 446.

[338] *Slivenko v. Latvia* [GC], No. 48321/99, ECHR 2003-X, p. 265, para. 120. The Agreement on the withdrawal of the armed forces of the Russian Federation from the territory of the Republic of Latvia was signed in Moscow on 30 April 1994.

[339] *Slivenko and Others v. Latvia* (dec.) [GC], No. 48321/99, decision on admissibility of 23 January 2002, ECHR 2002-II (extracts), pp. 482–483, paras. 60–61. For a critical discussion, see also I. Ziemele, "Case-law of the European Court of Human Rights and integrity of international law", in Huesa Vinaixa and Wellens (eds.) (footnote 14 above), p. 201.

[340] *Al-Adsani v. the United Kingdom* (see footnote 219 above), p. 79.

[341] Sinclair (see footnote 63 above), p. 97; Aust, *Modern Treaty Law…* (see footnote 74 above), p. 174.

3. When all the parties to the earlier treaty are parties also to the later treaty but the earlier treaty is not terminated or suspended in operation under article 59, the earlier treaty applies only to the extent that its provisions are compatible with those of the latter treaty.

4. When the parties to the later treaty do not include all the parties to the earlier one:

(*a*) As between States parties to both treaties the same rule applies as in paragraph 3;

(*b*) As between a State party to both treaties and a State party to only one of the treaties, the treaty to which both States are parties governs their mutual rights and obligations.

5. Paragraph 4 is without prejudice to article 41, or to any question of the termination or suspension of the operation of a treaty under article 60 or to any question of responsibility which may arise for a State from the conclusion or application of a treaty the provisions of which are incompatible with its obligations towards another State under another treaty.

252. Much of this text is relatively uncontroversial and/or captures the state of general law as represented above. This is especially so as regards the reference to Article 103 of the Charter in paragraph 1 and to the conflict clauses in paragraph 2. Paragraph 3 "effectively codifies the *lex posterior* rule".[342] This concerns the situation where either the parties to the later treaty are identical or, in addition to all the parties to the earlier treaty, some new parties are also present. As under the traditional standard, too, *lex posterior* applies only if nothing else follows from party intent.

1. The question of "same subject-matter"

253. Article 30 deals with the issue of conflict between prior and subsequent treaties. As many commentators have noted, however, it does not appear to do so very successfully.[343] One of the problems is that the title of the article (and paragraph 1) seems to limit it to a conflict between treaties "relating to the same subject-matter". If that limitation is interpreted strictly, then it seems to leave most of the important cases—for example conflicts between environmental and trade treaties, or conflicts between human rights and humanitarian law treaties—outside its scope.[344] However, as pointed out in the previous section, this is neither a necessary nor a reasonable interpretation of the expression "same subject-matter".

254. Terms such as "human rights law", "trade law", "environmental law" and so on are arbitrary labels for forms of professional specialization. There are no rules on how to qualify particular treaty regimes, and most regimes could be qualified from a number of such perspectives. Human rights treaties, for example, are often used to further environmental objectives, while trade regimes presuppose and are built upon the protection of human rights (in particular the right to property). The qualifications do not link to the *nature of the instrument* but to the *interest* from the perspective of which the instrument is assessed by the observer. To limit the application of article 30 to treaties "dealing with the same subject" would allow States to deviate from their obligations simply by qualifying a novel treaty in terms of a novel "subject". They might, for example, derogate from their obligations under refugee instruments simply by concluding an instrument on an allegedly novel subject of "the law of human movement".[345] As pointed out above, the test of whether two treaties deal with the "same subject-matter" is resolved by assessing whether fulfilment of an obligation under one treaty affects the fulfilment of obligations under another. This "affecting" might then take the form either of strictly preventing the fulfilment of the other obligation or of undermining its object and purpose in one way or another.

255. Nevertheless, it will also be argued below that the question of the relationship between two treaties cannot be resolved completely in abstraction from any institutional relationship between them. The way a WTO treaty links with a human rights treaty, for example, is not identical to the way a framework treaty on an environmental matter relates to a regional implementation instrument. It may not be possible to determine, in an abstract way, when two instruments deal with the "same subject-matter". But this does not mean that it would be impossible to establish an institutional connection between "chains" or clusters of treaties that are linked institutionally and that States parties envisage as part of the same concerted effort. The significance of identifying such "treaty regimes" lies in the way it seems relatively less complicated to establish a relationship between two instruments *within* one such regime than between two instruments *across* different regimes. For example, the *lex posterior* or *lex specialis* arguments clearly seem more powerful between treaties within a regime than between treaties from different regimes. In the former case, the legislative analogy seems less improper than in the case of two treaties concluded with no conscious sense that they are part of the "same project".

256. The distinction between treaties dealing with the "same subject-matter" and treaties within the same "regime" may appear slight, but it constitutes an important practical shift of perspective. In the former case, focus is on the object that is being regulated, while in the latter case focus is on the intent of the States parties and the institutions they have established. The former is dependent on an abstract characterization of an issue as a "human rights issue", an "environmental problem" or a "trade question", and meets with the difficulty that often many characterizations may be applied to a single problem and different actors may have an interest in characterizing the problem in different ways so as ensure that their preferred rule systems will be applied. By contrast, the notion of a "regime" points to the institutional arrangements that may have been established to link sets of treaties to each other. Treaties may of course end up in conflict both within and across regimes. To make that distinction is merely to point out that the task of settling the conflict—for example, by seeking a "mutually supportive solution"—may be much easier or more straightforward in the former than in the latter situation, where a conflict of wider objectives or values underlying the very regimes themselves is often at issue.

[342] Borgen (see footnote 10 above), p. 603; Mus (see footnote 21 above), pp. 219–220.

[343] Vierdag (see footnote 20 above), pp. 92–108; Sadat-Akhavi (see footnote 21 above), pp. 70–84; Borgen (see footnote 10 above), p. 603; Fitzmaurice amd Elias, *Contemporary Issues…* (see footnote 74 above), pp. 314–331; Sinclair (see footnote 63 above), p. 98.

[344] This has been suggested most recently by Borgen (see footnote 10 above), pp. 611–615. Cf. Sinclair (footnote 63 above), p. 98.

[345] Some of the debate about a new "terrorism law" exemplifies this concern.

2. The International Law Commission's debates

257. If much of article 30 was uncontroversial, this was not so in regard to paragraph 4, that is to say, the situation where the later treaty does not include as parties all the States that are parties to the earlier treaty. Unsurprisingly, this was the question on which most of the debates in the Commission focused. Two questions were highlighted: whether the relationship between incompatible treaties should be thought of in terms of "validity" or "priority" between them; and whether there was reason to single out special groups of treaties for separate treatment. There was general agreement (and therefore less discussion) on the fact that the provisions would need to reflect the priority to be accorded to *jus cogens* and to the Charter of the United Nations, as provided under Article 103 thereof.[346] There was also no disagreement that, in cases of subsequent bilateral or multilateral treaties with identical membership, the later treaty would generally prevail—the parties being always entitled to terminate the prior treaty by a subsequent one (apart from the question of peremptory norms). The most important question was how to deal with a situation where not all of the parties to the prior treaty were parties to the later treaty and where there were States that were parties to the later but not to the prior treaty. The discussions have frequently been summarized in the literature so a brief exposé will be sufficient.[347]

258. The first Special Rapporteur on the law of treaties, Lauterpacht, conceived of treaty conflict in terms of validity and advocated the *lex prior* rule—the invalidity of the later treaty.[348] It was qualified by two conditions, however. First, invalidity (of the later treaty) would follow only "if the departure from the terms of the prior treaty is such as to interfere seriously with the interests of the other parties to that treaty or seriously impair the original purpose of the treaty".[349]

259. The second exception concerned "multilateral treaties, such as the Charter of the United Nations, partaking of a degree of generality which imparts to them the character of legislative enactments properly affecting all members of the international community or which must be deemed to have been concluded in the international interest."[350]

260. In this latter case, the subsequent treaty would override the prior treaty. These provisions express Lauterpacht's effort to think of treaties in the image of domestic law, and especially to view multilateral treaties as functional equivalents to domestic legislation within a robust system of international legality. While he thought of the first qualification as already *de lege lata*, he felt the latter would involve progressive development.[351]

261. The second Special Rapporteur on the law of treaties, Fitzmaurice, rejected invalidity as the proper consequence of treaty conflict. There were so many treaties, and States were generally so ignorant of each other's commitments, that it would be unfair to the innocent party if conflict were to occasion automatic invalidity.[352] Besides, Fitzmaurice held, there was practically no support from international practice for such a drastic consequence. Therefore, he preferred the solution already proposed in the Harvard research on the law of treaties in 1935 that would provide, as the main rule, for the "priority" of the earlier—a position that that would not invalidate the later treaty, nor even prohibit States from entering into incompatible treaties.[353] The practical problem would be resolved by liability to the innocent party. It remained in practice (although Fitzmaurice was clearly unhappy about this) for the State having undertaken the incompatible obligations to choose which of the agreements it would fulfil.[354]

262. Like Lauterpacht, Fitzmaurice felt the need to qualify the priority of the earlier treaty by taking into account the case of treaties that involved "a more absolute type of obligation" than ordinary treaties building on reciprocal promises or benefits between parties. He defined two types of such treaties: "integral" and "interdependent" ones. Treaties of the former group were such that the performance of the obligation by one party was altogether independent of the performance of that obligation by others, such as with humanitarian or human rights conventions. In the second case—typically disarmament treaties—the obligation of each party was "dependent on a corresponding performance of the same thing by *all** the parties". Treaties conflicting with these would be sanctioned by invalidity. In other words, Fitzmaurice preserved Lauterpacht's solution for this special type of ("objective", "legislative") treaties.[355]

263. The third Special Rapporteur on the law of treaties, Waldock, maintained and extended the move from invalidity to priority. He stressed the need to treat with extreme caution suggestions that treaties among sovereign States could face the sanction of invalidity. Potential conflicts needed to be dealt with first by interpretation and by seeking to make them coherent. If it were impossible to reconcile the treaties, then the States would have to agree on priority, with liability to the innocent party.

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[346] Third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur (A/CN.4/115) (see footnote 139 above), pp. 27, 41, draft article 18, para. 1, and commentary, para. 77; and second report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/156 and Add.1–3) (see footnote 331 above), pp. 54, 61, draft article 14, paras. 3, and 4, and paras. (32)–(35) of commentary. The question of whether conflict with *jus cogens* or Article 103 of the Charter leads invariably to the invalidity of the conflicting rule will be discussed in chapter IV below.

[347] See, for example, Binder (footnote 145 above), pp. 49–65, and Mus (footnote 21 above), pp. 222–227.

[348] See the first report on the law of treaties by Hersch Lauterpacht, Special Rapporteur (A/CN.4/63) (footnote 144 above), pp. 156–159. In accordance with his consistent application of the domestic analogy, he insisted that international tribunals should have jurisdiction to declare the nullity of the later treaty and to provide for damages for any resulting loss to a party to the later treaty that had been unaware of the prior treaty (*ibid*., p. 156).

[349] *Ibid*., draft article 16, para. 3.

[350] *Ibid.*, para. 4.

[351] *Ibid.*, p. 157, paras. (5) and (6) of the commentary to draft article 16.

[352] Third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur (A/CN.4/115) (see footnote 139 above), pp. 41–42, para. 83, commentary to draft article 18.

[353] Draft convention on the law of treaties, Harvard Research in International Law, AJIL, vol. 29, supplement (1935), pp. 1024–1025.

[354] He conceded that, although there was no "right of election", there was nonetheless a "power of election" (third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur (A/CN.4/115) (see footnote 139 above), p. 42, para. 85).

[355] Second report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur, *Yearbook ... 1957*, vol. II, document A/CN.4/107, p. 54, paras. 124–126; see also third report on the law of treaties (A/CN.4/115) (footnote 139 above), p. 49, para. 91.

264. Unlike his predecessors, Waldock did not reserve special treatment for legislative or "objective" treaties. There was, he felt, no support for this in international practice.[356] The nature and importance of the provisions in such treaties were in any case so heterogeneous that a general rule was out of place. If some treaties—such as those on the laws of war—contained especially important provisions, they were protected by their *jus cogens* character. But because the treaties preserved the right of unilateral denunciation, it seemed illogical to exclude the possibility of giving effect to subsequent treaties that in fact implied such a denunciation.[357]

265. Waldock's solution was to relativize the problem. For States that were parties to the first but not the second treaty, the first enjoyed priority. If all parties to the second were also parties to the first treaty, then this was an *inter se* agreement whose permissibility would have to be resolved by interpreting the first treaty.[358]

266. In the course of the discussion, an important distinction emerged between two types of cases where the group of parties to the later multilateral treaty was not identical with the group of parties to the earlier treaty: (*a*) cases where some States were parties to the later treaty but not parties to the earlier one; and (*b*) cases where *all* parties to the later treaty were also parties to the earlier treaty. The latter case covered what was subsequently called *inter se* modification of the treaty, which was dealt with separately under article 41 (see section D below).

C. Special clauses

267. Owing to the inconclusive nature of the general law on conflicts between successive norms, as well as the generally open-ended formulations of article 30 of the 1969 Vienna Convention, it seems important that States include some direction in treaties themselves as to what to do with subsequent or prior conflicting treaties. The following sections will contain: (*a*) a brief typology of conflict clauses; (*b*) a discussion of conflict clauses between and across "regimes"; (*c*) the conflict clauses incorporated in the Treaty establishing the European Community; and (*d*) the practice of the so-called "disconnection clause".

1. A typology of conflict clauses

268. Among the various categories of conflict clauses, at least the following may be distinguished:[359]

(*a*) *Clauses that prohibit the conclusion of incompatible subsequent treaties*. This is an express exception to the *lex posterior* rule, designed to guarantee the normative power of the earlier treaty. For example, under article 8 of the North Atlantic Treaty: "Each Party declares that none of the international engagements now in force between it and any other of the Parties or any third State is in conflict with the provisions of this Treaty, and undertakes not to enter into any international engagement in conflict with this Treaty".[360]

(*b*) *Clauses that expressly permit subsequent "compatible" treaties*. One example might be article 311, paragraph 3, of the United Nations Convention on the Law of the Sea, which provides as follows:

> Two or more States Parties may conclude agreements modifying or suspending the operation of provisions of this Convention, applicable solely to the relations between them, provided that such agreements do not relate to a provision derogation from which is incompatible with the effective execution of the object and purpose of this Convention, and provided further that such agreements shall not affect the application of the basic principles embodied herein, and that the provisions of such agreements do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.

(*c*) *Clauses in the subsequent treaty providing that it "shall not affect" the earlier treaty*. One example would be article 30 of the 1958 Geneva Convention on the High Seas, according to which:

> The provisions of this Convention shall not affect conventions or other international agreements already in force, as between States Parties to them.

This provides for a presumption of harmony, also rebuttable, between the earlier and the subsequent treaty.[361]

(*d*) *Clauses in the subsequent treaty which provide that, among the parties, it overrides the earlier treaty*. This is really one case of "modification" of an agreement by an *inter se* agreement and will be covered at more length in section D below.

(*e*) *Clauses in the subsequent treaty that expressly abrogate the earlier treaty*.[362] An example would be article 311, paragraph 1, of the United Nations Convention on the Law of the Sea, according to which between parties to it and to the 1958 Geneva Conventions on the Law of the Sea, the former shall prevail.

(*f*) *Clauses in subsequent treaties that expressly maintain earlier compatible treaties*. One example would be article 311, paragraph 2, of the United Nations Convention on the Law of the Sea, according to which:

> This convention shall not alter the rights and obligations of States parties which arise from other agreements compatible with this Convention and which do not affect the enjoyment by other States parties of their rights or the performance of their obligations under this Convention.

(*g*) *Clauses promising that future agreements will abrogate earlier treaties*. This is a kind of *pactum de contrahendo*. One example is article 307 (formerly article 234) of the Treaty establishing the European Community, which provides that the rights and obligations

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[356] Second report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/156 and Add.1–3 (see footnote 331 above), p. 58, para. (20) of the commentary to draft article 14.

[357] *Ibid.*, pp. 59–60, paras. 25–30.

[358] *Ibid.*, p. 60, para. 31.

[359] See Rousseau, "De la compatibilité des normes juridiques contradictoires…" (footnote 36 above), pp. 154–164; Czapliński and Danilenko (footnote 74 above), p. 14; Mus (footnote 21 above), pp. 214–217; Aust, *Modern Treaty Law…* (footnote 74 above), pp. 174–181; Sadat-Akhavi (footnote 21 above), pp. 86–97; Fitzmaurice and Elias, *Contemporary Issues…* (footnote 74 above), pp. 323–325; Daillier and Pellet, *Droit international public* (footnote 74 above), pp. 268–271; and Borgen (footnote 10 above), pp. 584–587.

[360] See Aufricht (footnote 118 above), pp. 666–667.

[361] See Borgen (footnote 10 above), p. 586, and Aufricht (footnote 118 above), p. 669.

[362] Aufricht (see footnote 118 above), pp. 661–663.

of members ensuing from treaties concluded before membership are not affected. The members, however, commit to take action so as to abrogate those treaties (see further subsection C.3 below).

269. Although such clauses are undoubtedly useful, there is a limit to what they can achieve. They cannot, for instance, affect the rights of third parties or interfere with the operation of *jus cogens* or other hierarchical principles (such as those having to do with integral or interdependent obligations).[363]

270. But even though there are conflict clauses, their meaning or effect may sometimes be obscure. An example is provided by article 22 of the 1992 Convention on Biological Diversity:

> 1. The provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except when the exercise of those rights and obligations would cause serious damage or threat to biological diversity.
>
> 2. Contracting Parties shall implement this Convention with respect to the marine environment consistently with the rights and obligations of States under the law of the sea.

271. It seems unclear what is in fact being overridden by what in these formulations. Of course, the provision may be read as an exhortation that the relevant instruments should always be read as compatible with each other (*i.e.* the principle of systemic integration—see chapter V below) within an overall obligation to cooperate.[364] Sometimes this objective is actually written into the relevant conflict clause.[365] But where a party claims a right on the basis of the Convention on Biological Diversity or some other treaty, it would seem difficult to *deny* such a right by interpretation or "coordination". Besides, sometimes conflict clauses may themselves conflict or cancel each other out.[366] In such cases, recourse must be had to general principles of conflict resolution.

2. Relations within and across regimes: environmental treaties

272. As the previous considerations have shown, article 30 of the 1969 Vienna Convention has its limits. It works best when dealing with a relationship between two treaties on a related topic that have identical parties. It is then fair to assume that the later treaty expresses a more recent party will, and should therefore be given effect. When the parties are non-identical, article 30 allows the State having concluded incompatible obligations to choose which of them it will observe. Confronted with relations *between* treaty regimes, such as those habitually understood to exist in trade law, human rights law or environmental law, article 30 remains equally disappointing. The straightforward priority of one treaty over another (that is, in fact, of one regime over another) cannot be reasonably assumed on a merely chronological basis. There is a need for a more nuanced approach. It is unlikely, however, that such an approach might be developed within dispute settlement, which will perforce be limited to *ad hoc* considerations. Instead, it might be facilitated through the adoption of appropriate conflict clauses. Two types of such clauses may be distinguished. A first type might follow article 30 of the Convention and seek resolution by establishing firm priority between two treaties. A second type, discussed in this section, avoids straightforward priority and seeks instead to coordinate the simultaneous application of the two treaties as far as possible.

273. The relationship between treaties that belong to different regimes is a general problem. Its most acute manifestation has concerned relations between instruments forming part of trade and environmental regimes.[367] Although negotiators appear increasingly aware of the problem, practice has so far developed in an incoherent manner. For instance, in the negotiations on the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2000), the relationship of the Protocol to the obligations of the parties under agreements covered by WTO was extensively debated. As a result, the Protocol includes provisions concerning its relationship with trade instruments, but leaves many other important treaty relations unaddressed. These include its relationship to, for example, the International Plant Protection Convention, the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction.[368]

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[363] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (see footnote 323 above), p. 38, para. (15) of the commentary to draft article 65.

[364] As suggested in Wolfrum and Matz, *Conflicts in International Environmental Law* (see footnote 22 above), p. 125; Matz, *Wege zur Koordinierung völkerrechtlicher Verträge…* (see footnote 22 above), pp. 191–194 *et seq.*; and Fitzmaurice and Elias, *Contemporary Issues…* (see footnote 74 above), p. 333. For a useful discussion of the ambiguities of the conflict clause in the Cartagena Protocol on the Safety of Biotechnology to the Convention on Biological Diversity, see S. Safrin, "Treaties in collision? The Biosafety Protocol and the World Trade Organization agreements", AJIL, vol. 96, No. 3 (July 2002), p. 606.

[365] Article 237, paragraph 2, of the United Nations Convention on the Law of the Sea, for example, yields to specific environmental treaties, provided these are implemented "in a manner consistent with the general principles and objectives of this Convention". See further Fitzmaurice and Elias, *Contemporary Issues…* (footnote 74 above), pp. 334–336.

[366] This is the case of article 311, paragraph 3, of the United Nations Convention on the Law of the Sea and article 22, paragraph 1, of the Convention of Biological Diversity. For a discussion, see Fitzmaurice and Elias, *Contemporary Issues…* (footnote 74 above), p. 334.

[367] For instance, Sadat-Akhavi (see footnote 21 above), pp. 213–247, has dealt with specific conflict resolution techniques for different types of treaties, *e.g.* human rights treaties and the principle of "more favourable provision"; Pauwelyn, *Conflict of Norms…* (see footnote 21 above), pp. 345–361, has dealt with the conflict clauses in the WTO treaty; D. E. Siegel, "Legal aspects of the IMF/WTO relationship: the Fund's articles of agreement and the WTO agreements", AJIL, vol. 96, No. 3 (July 2002), p. 561; A. Lindroos, "Addressing norm conflicts in a fragmented legal system: the doctrine of *lex specialis*", *Nordic Journal of International Law*, vol. 74, No. 1 (2005), p. 27, at pp. 30–34, 60–64; Wolfrum and Matz, *Conflicts in International Environmental Law* (see footnote 22 above) have extensively dealt with conflicts between environmental and other treaties. The fact that environmental treaties have particularly wide potential for conflict with other treaties, as most matters bear a relationship to the environment, is stressed in Matz, *Wege zur Koordinierung völkerrechtliche Verträge…* (see footnote 22 above), pp. 53–73. The World Health Organization has considered the issue in the context of the International Health Regulations: "*Review and approval of proposed amendments to the International Health Regulations: relations with other international instruments*"(A/IHR/IGWG/INF.DOC./1), 30 September 2004.

[368] Safrin (see footnote 364 above), p. 617.

274. The final wording of the relevant preambular passages in the Cartagena Protocol on Biosafety to the Convention on Biological Diversity illustrates current problems:

> *Recognizing* that trade and environment agreements should be mutually supportive with a view to achieving sustainable development,
>
> *Emphasizing* that this Protocol shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreements,
>
> *Understanding* that the above recital is not intended to subordinate this Protocol to other international agreements…[369]

275. The negotiators have been reluctant to decide how, exactly, environmental and trade agreements should be related to each other or to any other further agreement.[370] The only thing they appear to have agreed is that the Cartagena Protocol on Biosafety to the Convention on Biological Diversity should be seen as no less important than any other agreement. Similar clauses may be found in other treaties. For example, the preamble to the International Treaty on Plant Genetic Resources for Food and Agriculture (2001) provides that it should not be interpreted as "implying in any way a change in the rights and obligations of the Contracting Parties under other international agreements". It then expresses the understanding that this principle "is not intended to create a hierarchy between this Treaty and other international agreements".

276. Such formulations do imply a willingness to acknowledge the existence of parallel and potentially conflicting treaty obligations. But they fall short of indicating clearly what should be done in the event that conflicts emerge. Instead, recourse is had to compromise formulas that, as it were, push the resolution of problems to the future. The first paragraph of the conflict clause in the preamble to the Cartagena Protocol on Biosafety to the Convention on Biological Diversity, for example, provides that "trade and environment agreements should be mutually supportive with a view to achieving sustainable development". The assumption is that conflicts may and should be resolved between treaty partners as they arise and with a view to mutual accommodation.[371] Likewise, the International Treaty on Plant Genetic Resources for Food and Agriculture, mentioned above, recognizes "that this Treaty and other international agreements relevant to this Treaty should be mutually supportive with a view to sustainable agriculture and food security". Other treaties include conditional conflict clauses that also leave much room for appreciation and negotiation. For instance, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) allows parties to enter into other agreements "provided that such agreements or arrangements do not derogate from the environmentally sound management of hazardous wastes and other wastes as required by this Convention".[372] And the 1992 Convention on Biological Diversity states that "[t]he provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause serious damage or threat to biological diversity."[373]

277. Such clauses give recognition to the fact that that it seems inadvisable to produce a general rule on treaty priority. For this, the treaties and the situations that may arise are too heterogeneous. Instead, the parties appeal to each other's sense of accommodation and willingness to envisage "mutually supportive" roles for their instruments. This is simply another way to emphasize the importance of harmonizing interpretation. This may work well between treaties that are part of the same regime and share a similar object and purpose or carry a parallel "ethos", for example between several environmental or trade instruments *inter se*. But it cannot be assumed *a priori* that a similar readiness exists between parties to treaties across regimes, treaties that seek to achieve physically incompatible solutions, or treaties inspired by very different (perhaps opposite) objectives in situations experienced as zero-sum games. In such cases, at the end of the day, one treaty must be preferred over the other. At that point, focus shifts from coordination to rights and obligations. While open-ended or programmatic provisions are easily amenable to accommodation, this cannot be said of provisions laying out (subjective) rights or obligations. In giving effect to them, it remains important to provide for the possibility of recourse to regime-independent dispute settlement.

278. Mutual accommodation is easiest between two instruments within a regime, especially between a framework agreement and a more specific (implementation) agreement.[374] For example, many of the conflict clauses in the United Nations Convention on the Law of the Sea are quite open-ended and refrain from setting up neat priorities. This is understandable. There is often reason to encourage further specific regulation. The implementation agreement will then prevail as *lex specialis,* while the framework instrument remains "in the background" as *lex generalis,* as pointed out in chapter II above. Article 311, paragraph 3, of the United Nations Convention on the Law of the Sea allows States to conclude modifying agreements

> provided that such agreements do not relate to a provision derogation from which is incompatible with the effective execution of the object and purpose of this Convention, and provided further that such agreements shall not affect the application of the basic principles embodied

[369] Cartagena Protocol on the Safety of Biotechnology to the Convention on Biological Diversity, depositary notification C.N.251.2000. TREATIES-1 of 27 April 2000; C.N.1471.2003.TREATIES-41 of 22 December 2003 (proposal of corrections to the Arabic text of the Protocol) and C.N.291.2004.TREATIES-11 of 26 March 2004 (rectification of the Arabic text of the Protocol and transmission of the relevant *procès-verbal*). See also ILM, vol. 39, No. 5 (September 2000), p. 1027.

[370] Safrin (see footnote 364 above), pp. 618–621, and Borgen (see footnote 10 above), p. 614.

[371] The content and form of this "obligation to coordinate" is discussed at length in Matz, *Wege zur Koordinierung völkerrechtlicher Verträge…* (see footnote 22 above), pp. 233–390.

[372] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, art. 11, para. 1.

[373] Convention on Biological Diversity, art. 22, para. 1.

[374] Wolfrum and Matz, *Conflicts in International Environmental Law* (see footnote 22 above), p. 121. The relationship between the United Nations Convention on the Law of the Sea as an umbrella convention and an implementing agreement, in relation to a dispute settlement system, was raised in the *Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan* (see footnote 26 above).

herein, and that the provisions of such agreements do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention.

279. Here "compatibility" has been formulated rather loosely. Parties are given wide latitude to conclude agreements on topics dealt with by the Convention, with the sole caveat that this should not "affect the application of the basic principles" or the "rights" and "obligations" of the parties. Although there is room to interpret the expressions "rights" and "obligations" either more or less strictly, the thrust of the provision lies in a search for reasonable accommodation. Like the environmental treaties discussed above, it seems to look for "mutually supportive" roles for the Convention and those particular instruments. What this means if an agreement seems to be in outright conflict with the Convention remains unclear.[375]

280. The weakness of the strategy of seeking a "mutually supportive" interpretation lies in its open-endedness. By concluding this type of conflict clause, States parties transfer their competence to decide on what should be done if conflicts arise to those who apply the law. This may work well if the two treaties are part of the same regime. But if the conflict is between treaties across two regimes, then the solution works only if the law-applier is an impartial third party that approaches the conflicting instruments from beyond the regimes of which the treaties are part. It might happen, however, that the law-applier will be a body or an administrator closely linked to one or other of the (conflicting) regimes. In such a case, an open-ended conflict clause will come to support the primacy of the treaty that is part of the law-applier's regime.

281. Conflict clauses referring to the fundamental purpose of the treaty are in line with the language of article 41, paragraph 1 (*b*) (ii), of the 1969 Vienna Convention, which requires that *inter se* agreements should not frustrate the object and purpose of the original treaty. Often such clauses also support the idea of interpreting treaties in a manner which preserves the rights and obligations under both treaties in a maximal way. A harmonizing approach ("mutually supportive") fits best with the aim of efficient management.

282. Nevertheless, the resulting interpretative openness creates a danger of "structural bias", *i.e.* that what is understood as a "mutually supportive" solution is determined in accordance with the priorities of the body whose task it is to interpret the conflict clause. To prevent this, it is still advisable to write the key provisions in multilateral treaties—and especially provisions that have to do with the substantive rights and obligations of the parties—with sufficient clarity so that they are not compromised at the stage of application.

3. Conflict clause in the Treaty establishing the European Community

283. Agreements establishing international organizations often contain a conflict clause. The best-known example is Article 103 of the Charter of the United Nations (see further chapter IV below). Likewise, article 307 (previously article 234) of the Treaty establishing the European Community sets up a conflict rule for agreements between member States and third parties.[376] The Treaty establishing the European Community takes absolute precedence over agreements that member States have concluded between themselves. In relation to third States, however, article 307 stipulates:

> The rights and obligations arising from agreements concluded before 1 January 1958 or, for acceding States, before the date of their accession, between one or more [m]ember States on the one hand, and one or more third countries on the other, shall not be affected by the provisions of this Treaty.
>
> To the extent that such agreements are not compatible with this Treaty, the [m]ember State or States concerned shall take all appropriate steps to eliminate the incompatibilities established. Member States shall, where necessary, assist each other to this end and shall, where appropriate, adopt a common attitude.
>
> In applying the agreements referred to in the first paragraph, [m]ember States shall take into account the fact that the advantages accorded under this Treaty by each [m]ember State form an integral part of the establishment of the Community and are thereby inseparably linked with the creation of common institutions, the conferring of powers upon them and the granting of the same advantages by all the other [m]ember States.

284. This article gives priority to treaties that a member State has concluded with third States before the entry into force of European Community treaties in regard to it.[377] The European Court of Justice has frequently clarified the scope of article 307.[378] In the *Burgoa* case, the Court confirmed that article 307 "is of general scope and it applies to any international agreement, irrespective of subject-matter, which is capable of affecting the application of the Treaty".[379] Neither the wording of the article nor subsequent case law accepts the extension of the provision to agreements concluded by member States after accession.[380] According to the leading case, the provision covers the rights of third parties and the obligations of member States:

> The applicant replies that the terms "rights and obligations" in Article 234 refer, as regards the "rights", to the rights of third countries and, as regards the "obligations", to the obligations of [m]ember States and that, by virtue of the principles of international law, by assuming a new obligation which is incompatible with rights held under a prior

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[375] Fitzmaurice and Elias, *Contemporary Issues…* (see footnote 74 above), p. 335, and Wolfrum and Matz, *Conflicts in International Environmental Law* (see footnote 22 above), pp. 15–31.

[376] I. MacLeod, I. D. Hendry and S. Hyett, *The External Relations of the European Communities: A Manual of Law and Practice,* Oxford, Clarendon Press, 1996, p. 229, and P. Eeckhout, *External Relations of the European Union: Legal and Constitutional Foundations*, Oxford, Oxford University Press, 2004, p. 334. See also, for example, J. Klabbers, "Re-inventing the law of treaties: the contribution of the EC courts", *Netherlands Yearbook of International Law,* vol. 30 (1999), p. 45; J. Klabbers, "Moribund on the fourth of July? The Court of Justice on prior agreements of the member States", *European Law Review*, vol. 26 (2001), pp. 187–197; C. N. K. Franklin, "Flexibility vs. legal certainty: article 307 EC and other issues in the aftermath of the Open Skies cases", *European Foreign Affairs Review*, vol. 10 (2005), p. 79; P. J. Kuijper, "The Court and the Tribunal of the EC and the Vienna Convention on the Law of Treaties 1969", *Legal Issues of European Integration*, vol. 25, No. 1 (1998), p. 1; F. E. Dowrick, "Overlapping European laws", *International and Comparative Law Quarterly*, vol. 27, No. 3 (July 1978), pp. 629–660.

[377] Klabbers, "Moribund on the fourth of July?…" (see footnote 376 above), pp. 187–188.

[378] Eeckhout (see footnote 376 above), p. 334.

[379] Case 812/79, *Attorney General v. Juan C. Burgoa*, judgment of 14 October 1980, *European Court Reports 1980*, p. 2787, at p. 2802, para. 6.

[380] Eeckhout (see footnote 376 above), p. 335.

treaty a State *ipso facto* gives up the exercise of these rights to the extent necessary for the performance of its new obligations.[381]

The applicant's interpretation is well founded and the objection raised by the defence must be dismissed.[382]

285. The distinction between the *rights* of third States and the *obligations* of member States relates to the question of whether a member State can claim that it cannot fulfil its obligations under Community law towards other member States owing to a treaty it has made with third States. In the aforementioned case the Italian Government had argued that it could not fulfil its obligations of intra-Community trade owing to its GATT commitments. This was quickly dispelled by the Court: "in matters governed by the [Treaty establishing the European Community], that Treaty takes precedence over agreements concluded between [m]ember States before its entry into force, including agreements made within the framework of GATT."[383] Article 307 cannot therefore be relied upon in relations between members to justify trade restrictions within the European Community.[384] Yet the division of rights and obligations is not unproblematic.[385] As pointed out by Klabbers, article 307 is clearly applicable to bilateral treaties, as well as to "bilateralizable" multilateral treaties. In respect of other kinds of multilateral treaties, article 307 has only limited applicability.[386]

286. Article 307 places no obligation on the European Community itself. However, as stated by the European Court of Justice in the *Burgoa* case:

Although the first paragraph of Article 234 makes mention only of the obligations of the [m]ember States, it would not achieve its purpose if it did not imply a duty on the part of the institutions of the Community not to impede the performance of the obligations of [m]ember States which stem from a prior agreement. However, that duty of the Community institutions is directed only to permitting the [m]ember State concerned to perform its obligations under the prior agreement and does not bind the Community as regards the non-member country in question.[387]

287. Under article 307 of the Treaty establishing the European Community, member States are allowed to carry out their earlier agreements with third States, and the European Community is under an obligation not to impede this. Nevertheless, member States are also obliged to take all appropriate steps to eliminate the incompatibilities between their European Community obligations and these previous treaties.[388] As the European Court of Justice has pointed out, this involves a duty to work actively so as to bring external obligations into line with European Community obligations:

Although, in the context of Article 234 of the Treaty, the [m]ember States have a choice as to the appropriate steps to be taken, they are nevertheless under an obligation to eliminate any incompatibilities existing between a pre-Community convention and the EC Treaty. If a [m]ember State encounters difficulties which make adjustment of an agreement impossible, an obligation to denounce that agreement cannot therefore be excluded.[389]

As regards the argument that such denunciation would involve a disproportionate disregard of foreign-policy interests … as compared with the Community interest, it must pointed out that the balance between the foreign-policy interests of a [m]ember State and the Community interest is already incorporated in Article 234 of the Treaty, in that it allows a [m]ember State not to apply a Community provision in order to respect the rights of third countries deriving from a prior agreement and to perform its obligations thereunder. That article also allows them to choose the appropriate means of rendering the agreement concerned compatible with Community law.[390]

288. The position of the European Court of Justice is that the requirement under article 307 "to eliminate any incompatibilities" is rather strict.[391] The Court appears willing to accept that a member State may face difficulties in bringing its external commitments into line with European Community law. This may sometimes involve a duty to denounce such commitments. In other words, as pointed out by Eeckhout, "[f]oreign-policy interests of the [m]ember States cannot override that obligation, and a [m]ember State cannot in principle argue that denunciation would be too harmful to those interests".[392] He also remarks that "[t]here is no suggestion that there may ever be cases where the [European] Community itself is required to act so as to remove incompatibilities, for example by amending Community law".[393]

4. Disconnection clauses

289. One practice that it may be appropriate to discuss here is the expansion of the so-called "disconnection clause" in multilateral agreements to which the European Community is a party. There are presently at least 17 multilateral treaties, having as parties both members and non-members of the European Community (and, in some cases, also the European Community itself), that contain this clause.[394] The purpose of the clause is, according

[381] Case 10/61, *Commission of the European Economic Community v. Government of the Italian Republic*, judgment of 27 February 1962, *European Court Reports 1962*, English special edition, p. 1, at p. 10. See also MacLeod, Hendry and Hyett (footnote 376 above), p. 230, and Eeckhout (footnote 376 above), pp. 337–338.

[382] *Commission of the European Economic Community Government of the Italian Republic* (see footnote 381 above), p. 132.

[383] *Ibid*.

[384] MacLeod, Hendry and Hyett (see footnote 376 above), p. 230. This was confirmed by the European Court of Justice in case 121/85, *Conegate Limited v. HM Customs & Excise*, judgment of 11 March 1986, *European Court Reports 1986*, p. 1007, at p. 1024.

[385] Klabbers, "Re-inventing the law of treaties…" (see footnote 376 above), p. 63.

[386] *Ibid.*, pp. 64–65.

[387] *Attorney General v. Juan C. Burgoa* (see footnote 379 above), p. 2803, para. 9.

[388] *Ibid.*, pp. 2807–2809, paras. 23–26, and Klabbers, "Moribund on the fourth of July?…" (see footnote 376 above), pp. 188–189.

[389] Case 62/98, *Commission of the European Communities v. Portuguese Republic*, judgment of 4 July 2000, *European Court Reports 2000*, p. 5171, at pp. 5211–5212, para. 49.

[390] *Ibid.*, p. 5212, para. 50.

[391] Klabbers, "Moribund on the fourth of July?…" (see footnote 376 above), pp. 195–196.

[392] Eeckhout (see footnote 376 above), p. 342.

[393] *Ibid.*

[394] Council of Europe Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime and on the Financing of Terrorism, 2005, art. 52, para. 4; Council of Europe Convention on Action against Trafficking in Human Beings, 2005, art. 40, para. 3; Council of Europe Convention on the Prevention of Terrorism, 2005, art. 26, para. 3; Convention on Contact concerning Children, 2003, art. 20, para. 3; Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, 2003, art. 20, para. 2; European Convention for the Protection of the Audiovisual Heritage, 2001, art. 21; European Convention on the Legal Protection of Services based on, or consisting of, Conditional Access, 2001, art. 11, para. 4; European Convention on the Promotion of a Transnational Long-Term Voluntary Service for Young People, 2000, art. 19, para. 2; UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects, 1995, art. 13, para. 3; Agreement on Illicit Traffic by Sea, implementing Article 17 of the United Nations Convention against Illicit Traffic in Narcotic Drugs

(*Continued on next page.*)

to the European Commission, to ensure the continuing application of Community rules between European Community member States, without any intent to affect obligations between member States and other parties to treaties.[395] The exact formulation of these clauses differs from one convention to another, but the core substance is captured in article 27, paragraph 2, of the Convention on Mutual Administrative Assistance in Tax Matters of 1988:

> Notwithstanding the rules of the present Convention, those Parties which are members of the European Economic Community shall apply in their mutual relations the common rules in force in that Community.

290. Some disconnection clauses are general and cover the whole of a treaty. Other clauses are only partial or qualified.[396] The clause in article 20, paragraph 2, of the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters is an example of a partial disconnection clause, aiming to replace only certain articles of the original treaty.[397] As an example of a conditional disconnection clause, mention could be made of article 26, paragraph 3, of the Council of Europe Convention on the Prevention of Terrorism, which refers to European Community rules "without prejudice to the object and purpose of the present Convention and without prejudice to its full application with other Parties". Another, perhaps equally ambiguous, condition is written into article 30, paragraph 3, of the Agreement on Illicit Traffic by Sea, implementing Article 17 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, which stipulates: "If two or more Parties have already concluded an agreement or treaty in respect of a subject dealt with in this Agreement or have otherwise established their relations in respect of that subject, they may agree to apply that agreement or treaty or to regulate those relations accordingly, in lieu of the present Agreement, if it facilitates international co-operation."[398]

291. In all cases, the rules of the treaty are replaced, in whole or in part, by European Community rules in relations between European Community members. The obligations between European Community members and other treaty parties remain, however, fully governed by the treaty. The inclusion of such clauses in multilateral treaties has given some cause for concern. It has seemed difficult to classify them by reference to provisions in the 1969 Vienna Convention, and the effect of the proliferation of such clauses on the coherence of the original treaty has seemed problematic.[399]

292. Article 30, paragraph 2, of the 1969 Vienna Convention provides that: "[w]hen a treaty specifies that it is subject to, or that it is not to be considered as incompatible with, an earlier or later treaty, the provisions of that other treaty prevail." This formulation also covers disconnection clauses. They are thus best analysed as conflict clauses added to treaties with a view to regulating potential conflicts between European Community law and the treaty. What may seem disturbing about such clauses is that they are open only to some parties to the original treaty, and the content of the European Community law to which they refer may be both uncertain and subject to change. Nevertheless, this is scarcely different from regular *inter se* amendments that also apply only between some parties and that may be subject to future modification.

293. Under what conditions is this type of clause permissible? The starting point is, of course, that the clause is agreed to by all the parties, so that no question of validity will arise. Nevertheless, the possibility cannot be excluded that the other parties might not know of the real import of the disconnection clause because the rules referred to therein (the relevant European Community rules) are obscure, or have been modified or interpreted in a new way. In this case, the European Community rules begin to resemble a new, successive treaty, covered by article 30, paragraph 4, of the 1969 Vienna Convention. According to article 30, paragraph 5, of this Convention, "[p]aragraph 4 [of article 30] is without prejudice to article 41".[400] Through this means, an open-ended discon-

(*Footnote 394 continued.*)

and Psychotropic Substances, 1995, art. 30, para. 3; European Convention relating to questions on Copyright Law and Neighbouring Rights in the Framework of Transfrontier Broadcasting by Satellite, 1994, art. 9, para. 1; Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, 1993, art. 25, para. 2; European Convention on Certain International Aspects of Bankruptcy, 1990, art. 38, para. 2; Protocol to the Convention on Insider Trading, 1989, art. 1; European Convention on Transfrontier Television, 1989, art. 27, para. 1; Convention on Insider Trading, 1989, art. 16 *bis*; Convention on Mutual Administrative Assistance in Tax Matters, 1988, art. 27, para. 2.

[395] The European Community/European Union and its [m]ember States have also included the following declaration in the Explanatory Report to the Council of Europe Convention on the Prevention of Terrorism: "'The European Community/European Union and its [m]ember States reaffirm that their objective in requesting the inclusion of a "disconnection clause" is to take account of the institutional structure of the Union when acceding to international conventions, in particular in case of transfer of sovereign powers from the [m]ember States to the Community. This clause is not aimed at reducing the rights or increasing the obligations of a non-European Union Party *vis-à-vis* the European Community/European Union and its [m]ember States, inasmuch as the latter are also parties to this Convention. The disconnection clause is necessary for those parts of the Convention which fall within the competence of the Community/Union, in order to indicate that European Union [m]ember States cannot invoke and apply the rights and obligations deriving from the Convention directly among themselves (or between themselves and the European Community/Union). This does not detract from the fact that the Convention applies fully between the European Community/European Union and its [m]ember States on the one hand, and the other Parties to the Convention, on the other; the Community and the European Union [m]embers States will be bound by the Convention and will apply it like any Party to the Convention, if necessary, through Community/Union legislation. They will thus guarantee the full respect of the Convention's provisions *vis-à-vis* non-European Union Parties.' As an instrument made in connection with the conclusion of a treaty, within the meaning of Article 31, para. 2(*b*) of the Vienna Convention on the Law of Treaties, this declaration forms part of the 'context' of the Convention" (Council of Europe, *Council of Europe Treaty Series*, No. 196, para. 272); see also L. Azoulai, "The acquis of the European Union and international organizations", *European Law Journal*, vol. 11 (2005), especially p. 211, and A. Schulz, "The relationship between the judgments project and other international instruments", preliminary document No. 24 of December 2003, Hague Conference on Private International Law, available from https://assets.hcch.net/upload/wop/genaff_pd19e.pdf.

[396] For a typology, see C. P. Economides and A. G. Kolliopoulos, "La clause de déconnexion en faveur du droit communautaire: une pratique critiquable", RGDIP, vol. 110 (2006), p. 273.

[397] *Ibid.*

[398] *Ibid.*

[399] *Ibid.*

[400] The drafting processes for the two articles overlapped considerably. See sections B.2, above, and D.4, below, of this chapter.

nection clause would *also* become conditioned by the requirements of article 41. During the preparatory work for the 1969 Vienna Convention, Mustafa Kamil Yasseen confirmed that a right to *inter se* modification should not be unlimited, but that any modification would need to respect the object and purpose of the treaty.[401] A similar position was taken by Alain Pellet in the context of reservations, as he explained that an expressly authorized, unspecified reservation must also fulfil the object and purpose test.[402] Thus, while the scope and content of the disconnection clause is normally covered by the original consent, if the regulation referred to in that clause will be modified, such modification may only be allowed to the extent that it does not "affect the enjoyment by the other parties of their rights under the treaty or the performance of their obligations [or] relate to a provision, derogation from which is incompatible with the effective execution of the object and purpose of the treaty as a whole", as stipulated in article 41, paragraph 1 (*b*), of the Convention.

294. Like *inter se* modification, a disconnection clause makes it possible for a limited group of parties to enhance the objectives of the treaty by taking measures that correspond to their special circumstances. But just like *inter se* agreements, this practice creates the possibility of undermining the original treaty regime. The actual effect of a disconnection clause depends on its specific wording. Their common point, however, is that they seek to replace a treaty in whole or in part with a different regime that should be applicable only between certain parties. The real substance of the clause is not apparent on its surface but lies in the regime referred to in the clause. It is the conformity of the substance of that regime with the treaty itself where the real point of concern lies. From the perspective of other treaty parties, the use of a disconnection clause might create double standards, be politically incorrect or just cause confusion.[403] To alleviate such concerns, some disconnection clauses are worded so as to be "without prejudice to the object and purpose of the present Convention". Nevertheless, even if they did not contain such a reference, the condition of conformity with object and purpose may, as pointed out above, derive from the conditions laid down for *inter se* modification. In assessing such conformity, two concerns seem relevant. First, a disconnection clause is agreed to by all the parties to a treaty. From this perspective, the practice seems unproblematic. The validity of a disconnection clause flows from party consent. On the other hand, it is not obvious that parties are always well informed of the content of the regime to which the clause refers, and that regime may change independently of the will or even knowledge of the other parties. In such cases, the criterion concerning conformity with object and purpose will provide the relevant standard for assessing the practice of the treaty parties. As elsewhere, the consideration of whether the provisions to which the treaty refers are what Fitzmaurice called "integral" or "interdependent" provisions—that cannot be separated from the treaty—seems relevant.

D. *Inter se* agreements

295. As pointed out above, during debates in the Commission on treaty conflict a distinction was constantly made between subsequent agreements among some treaty parties to *modify* the application of a treaty in their relations *inter se* and subsequent treaties in which, in addition to parties to the earlier treaty, also other States participated. The former situation (*inter se* agreements) is now covered in article 41 of the 1969 Vienna Convention.

296. The Commission's Special Rapporteurs emphasized the practical importance of *inter se* modifications to multilateral treaties. Lauterpacht pointed out that these were a much used technique whereby treaties could be developed so as to apply better in the relations between some parties, the only question being whether such an agreement might affect the rights of the other parties to the treaty to the extent of invalidating it.[404] Fitzmaurice described the *inter se* treaty as "one of the chief instruments, increasingly in use today, whereby a given treaty situation can be changed in a desirable and perhaps necessary manner".[405] Waldock agreed that practice confirmed *inter se* agreements as "a normal method of revising general multilateral treaties".[406] Thus,

> in 1906 the Geneva Convention of 1864 for the Amelioration of the Condition of Wounded in Armies in the Field was revised by a new Convention which expressly provided that, when duly ratified, it should supersede the 1864 Convention in the relations between the contracting States, but that the 1864 Convention should remain in force in the relations of parties to that Convention who did not ratify the new Convention. A similar provision was inserted in the Hague Convention of 1907 on the Laws and Customs of War on Land, which revised the earlier Convention of 1899.[407]

297. Indeed, the conclusion of agreements between a limited number of parties to a multilateral treaty is an old practice, often provided for by the final clauses of a treaty itself.[408] Such *inter se* agreements do not necessarily derogate from the treaty. Instead, they serve to implement, update and strengthen the treaty in the relations between the parties to the modifying treaty. There is no reason in such cases not to allow them full effect.

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[401] *Yearbook ... 1966*, vol. I (Part Two), p. 219, summary record of the Commission's 876th meeting, held on 23 June 1966, para. 4.

[402] Tenth report on reservations to treaties by Alain Pellet, Special Rapporteur, *Yearbook … 2005*, vol. II (Part One), document A/CN.4/558 and Add.1–2, p. 141.

[403] See, for example: the speech by Serhiy Holovaty, Chairperson of the Committee on Legal Affairs and Human Rights of the Parliamentary Assembly of the Council of Europe, 7 April 2005, at the 26th Conference of European Ministers of Justice in Helsinki (available from www.coe.int/en/web/human-rights-rule-of-law/mju26-2005-helsinki); report for debate in the Standing Committee under urgent procedure, submitted by Rapporteuse Mrs. Ruth-Gaby Vermot-Mangold, concerning draft Council of Europe convention on action against trafficking in human beings, 15 March 2005 (available from http://assembly.coe.int/nw/xml/XRef/X2H-Xref-ViewHTML.asp?FileID=10806&lang=EN); P.J. Kuijper, "The conclusion and implementation of the Uruguay Round results by the European Community", EJIL, vol. 6 (1995), pp. 223–224; interim Health Protection Agency operational statement on the International Health Regulations, 12 May 2004.

[404] Second report on the law of treaties by Hersch Lauterpacht, Special Rapporteur, *Yearbook ... 1954*, vol. II, document A/CN.4/87, p. 136.

[405] Third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur (A/CN.4/115) (see footnote 139 above), p. 43, para. 89 (*b*), commentary to paragraph 8 of draft article 18.

[406] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.167 and Add.1–3) (see footnote 323 above), p. 49, para. (7) of the commentary to draft article 69.

[407] *Ibid.*

[408] For a discussion of typical cases where multilateral treaties have been updated and improved by later "special" (*inter se*) agreements, see Sadat-Akhavi (footnote 21 above), pp. 114–119.

298. For example, the 1961 Vienna Convention on Diplomatic Relations and the 1963 Vienna Convention on Consular Relations both allow the conclusion of agreements on their respective subject matters that provide more favourable treatment or confirm, supplement, extend or amplify their relevant provisions.[409] An example relating to the latter would be the agreement concluded between Czechoslovakia and Austria in 1979, in which the two States wished "to confirm, supplement and amplify the provisions of [the Vienna] Convention [on Consular Relations] in accordance with its article 73, paragraph 2, and thereby also contribute to the further development of friendly relations between the two States in conformity with the provisions of the Final Act of the Conference on Security and Co-operation in Europe".[410] Another example would be the European Convention on Consular Functions of 11 December 1967, in which member States of the Council of Europe that were parties to the Vienna Convention on Consular Relations extended the relevant privileges beyond what had been granted by that Convention, noting that these special rules had been established by virtue of the close cooperation among them.[411]

299. An example of a treaty expressly encouraging parties to conclude agreements that implement or extend its provisions further is provided by the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968, article VII of which provides that "[n]othing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories". As a consequence, several regional agreements reinforcing the prohibition of nuclear weapons at the regional level have in fact been concluded.[412]

300. Although all the Special Rapporteurs agreed that the faculty to conclude *inter se* agreements could not be unlimited, the emphasis was initially on the need to act in good faith in consultation with other parties.[413] The Commission focused on the process of notifying the other parties of an intended *inter se* agreement.[414] A separate draft (draft article 69) on this issue emerged from the Commission's debates in 1964.[415] Much of the debate was still about notification, although Bartoš paid attention to the case where *inter se* agreements "might also have an indirect effect on the interests of the parties to the original treaty".[416] In his sixth report, Waldock presented revised draft article 67, which dealt with agreements to modify multilateral treaties between certain parties only.[417] This article was generally accepted by Governments, and in discussion within the Commission in 1966 Reuter observed that it constituted "an ingenious compromise between two needs: the need to recognize the rights of the parties to a treaty in its initial form and the need to permit the modification of the treaty in order to take account of certain international requirements".[418] This was the basis on which the United Nations Conference on the Law of Treaties adopted what became article 41 of the 1969 Vienna Convention.

Article 41. Agreements to modify multilateral treaties between certain of the parties only

1. Two or more of the parties to a multilateral treaty may conclude an agreement to modify the treaty as between themselves alone if:

(*a*) The possibility of such a modification is provided for by the treaty; or

(*b*) The modification in question is not prohibited by the treaty and:

(i) Does not affect the enjoyment by the other parties of their rights under the treaty or the performance of their obligations;

(ii) Does not relate to a provision, derogation from which is incompatible with the effective execution of the object and purpose of the treaty as a whole.

2. Unless in a case falling under paragraph 1 (*a*) the treaty otherwise provides, the parties in question shall notify the other parties of their intention to conclude the agreement and of the modification to the treaty for which it provides.[419]

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[409] Article 47 of the Vienna Convention on Diplomatic Relations, and article 72 and article 73, para. 2, of the Vienna Convention on Consular Relations.

[410] Agreement on Consular Relations, signed at Prague on 14 March 1979, United Nations, *Treaty Series*, vol. 1224, No. 19752, p. 3. This agreement adds, *inter alia*, "member of the family" to the categories of persons defined in article 1 of the Vienna Convention on Consular Relations and expands the consular functions defined in the various paragraphs of article 5 of the Convention.

[411] Preamble. States members of the Council of Europe have concluded many *inter se* agreements that introduce more advanced special regimes into their relations than the general regimes of multilateral treaties that have their basis in the aim of the Council of Europe, which is "to achieve a greater unity between its members … [with a view to] facilitating their economic and social progress … by agreements and common action in economic, social, cultural, scientific, legal and administrative matters" (Statute of the Council of Europe, art. 1). See, for example, the European Convention relating to the Formalities required for Patent Applications of 11 December 1953 and the Convention on the Unification of Certain Points of Substantive Law on Patents for Invention of 27 November 1963, concluded on the basis of article 15 of the Paris Convention for the Protection of Industrial Property of 20 March 1883, as revised in 1934.

[412] See, for example, the Treaty on the Southeast Asia Nuclear Weapon-Free Zone of 15 December 1995 between the States of South-East Asia, the South Pacific Nuclear Free Zone Treaty (Rarotonga Treaty) of 6 August 1985 between the States of the South Pacific (Australia, New Zealand and the island States of the region) and the African Nuclear-Weapon-Free Zone Treaty (Pelindaba Treaty) of 11 April 1996, establishing nuclear-weapon-free zones in, respectively, South-East Asia, the Pacific (where a protocol expressly prohibits nuclear testing) and Africa.

[413] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (see footnote 323 above), p. 47.

[414] *Yearbook … 1964*, vol. I, p. 140, summary record of the Commission's 745th meeting, held on 15 June 1964.

[415] *Ibid.*, p. 143; see also pp. 140–152.

[416] *Ibid.*, p. 272, summary record of the Commission's 764th meeting, held on 13 July 1964, para. 84.

[417] Sixth report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/186 and Add.1–7) (see footnote 34 above), pp. 86–87, 119. Paragraph 1 of draft article 67 (Agreements to modify multilateral treaties between certain of the parties only) read: "Two or more of the parties to a multilateral treaty may conclude an agreement to modify the treaty as between themselves alone if: (*a*) The possibility of such modification is provided for by the treaty; or (*b*) The modification in question: (i) Does not affect the enjoyment by the other parties of their rights under the treaty or the performance of their obligations; (ii) Does not relate to a provision derogation from which is incompatible with the effective execution of the objects and purposes of the treaty as a whole; and (iii) Is not prohibited by the treaty."

[418] *Yearbook … 1966*, vol. I (Part II), p. 219, summary record of the Commission's 876th meeting, held on 23 June 1966, para. 9.

[419] A similar provision is also included in article 41 of the Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations (1986 Vienna Convention). They deal with the case of agreement between two or more parties to a multilateral treaty to modify the treaty as between

301. *Inter se* agreements give rise to two types of legal relations: the "general" relations that apply between all the parties to the original treaty and the "special" relations that apply between the States parties to the *inter se* agreement. Situations of this kind are not, however, peculiar to *inter se* agreements. For example, the option to object to or accept reservations can lead to a multilateral treaty having, on the one hand, comprehensive validity among the parties at large and, on the other, restricted validity between them and the States making reservations.[420]

302. An analogous situation may also arise in the process of treaty amendment when some of the parties undertake to revise the treaty but not all parties agree to the revision. In such a case, the treaty remains in force in its original form for the parties that do not participate in the amendment.[421] The same is true in regard to parties that do not ratify amendments: the original treaty remains in force between them, while the amended treaty enters into force for the others.[422] The difference between "amendment" and *inter se* agreements under article 41 is that the purpose of the latter is not to revise the original treaty, merely to modify its application in relations between certain parties.[423] Article 41 is intended to cover only the latter case.[424]

303. Article 41 seeks a compromise between two requirements: that of meeting the needs of a limited number of parties wishing to regulate their relations by *inter se* rules and that of allowing the other parties to continue applying the treaty regime in its initial form. It recognizes the right of parties to a multilateral treaty to create a special regime through an *inter se* agreement but, by placing strict conditions on the exercise of that right, seeks to protect the general regime of the treaty.

1. The conditions applicable to the conclusion of *inter se* agreements

304. A treaty may of course either expressly allow or expressly prohibit the conclusion of *inter se* agreements, either wholly or in part. When a treaty is silent, or to the extent that it is so, the question of their permissibility emerges. There may be cases where a modification might affect the interests or rights of the other parties to the treaty or the execution of the object and purpose of the treaty. For those reasons, article 41 of the 1969 Vienna Convention subjects the conclusion of *inter se* agreements to strict conditions.[425] An *inter se* agreement is permissible when it:

> (i) Does not affect the enjoyment by the other parties of their rights under the treaty or the performance of their obligations;
>
> (ii) Does not relate to a provision, derogation from which is incompatible with the effective execution of the object and purpose of the treaty as a whole.

(a) *Preservation of the rights and interests of the parties to the original treaty*

305. Article 41, paragraph (1) (*b*) (i), sets out the first of the conditions that an *inter se* agreement must satisfy, namely that the agreement must not affect the enjoyment by the other parties of their rights under the treaty or the performance of their obligations. This seems natural.[426] The legal effects of an *inter se* agreement are limited to its parties. They remain bound by the original treaty and must continue to observe it in their relations with the other parties as if the *inter se* agreement did not exist. However, in some cases the drafters of the original treaty may have expressly foreseen and permitted particular types of *inter se* deviation. For example, article XXIV of GATT provides for the formation and maintenance of "customs unions" and "free-trade areas" on condition that the conditions of commerce under them "on the whole [must not] be higher or more restrictive than the general incidence" of such duties and regulations before the formation of the union. The assumption here is, clearly, that RTAs do not generally undermine the multilateral free trade system. Nonetheless, they may also create vested interests and counteract any wider trade harmonization. In any case, such agreements have frequently been referred to in the WTO dispute settlement system, and there has certainly

themselves only. Such *inter se* agreements may be rationalized as a case of either *lex posterior* or *lex specialis*. Whichever rationale is used, however, the provision operates similarly.

[420] See P. Reuter, *Introduction au droit des traités*, 3rd ed. revised by P. Cahier, Paris, Presses Universitaires de France, 1995, p. 76.

[421] See the statement by Mr. Yasseen at the Commission's 746th meeting, held on 16 May 1964, *Yearbook ... 1964*, vol. I, pp. 151–152, para. 51.

[422] See the statement by Mr. Castrén at the Commission's 752nd meeting, held on 26 June 1964, *ibid.*, p. 190, para. 67.

[423] The Commission has rejected the use of the term "revision" because of its political connotation, opting for the term "amendment" to denote alteration of a multilateral treaty by all the parties and "modification" to denote alteration of a multilateral treaty by an *inter se* agreement, an event dealt with in a separate article. See the discussion at the Commission's 747th meeting, held on 17 May 1964, *ibid.*, pp. 152–157.

[424] The Commission nonetheless felt it necessary to spell out the distinction in its report to the General Assembly by saying: "there is an essential difference between amending agreements designed to amend a treaty between the parties generally and agreements designed *ab initio* to modify the operation of the treaty as between certain of the parties only, that is, as *inter se* agreements. Although an amending instrument may equally turn out to operate only between certain of the parties, the Commission considered that a clear-cut distinction must be made between the amendment process *stricto sensu* and *inter se* agreements modifying the operation of the treaty between a restricted circle of the parties" (*ibid.,* vol. II, pp. 195–196, para. (9), commentary to article 66).

[425] See the statement by Sir Humphrey Waldock at the Commission's 860th meeting, held on 27 May 1966: "However, the Commission attached importance to article 67 and by specifying fairly strict conditions in paragraph 1, had recognized that *inter se* agreements could represent a potential threat to the interests of the other parties to the original agreement" (*Yearbook ... 1966*, vol. I (Part II), p. 128, para. 88). Article 22 (*b*) of the draft convention on the law of treaties in the Harvard Research in International Law (see footnote 353 above), pp. 1016–1024, laid down similar conditions for *inter se* agreements. See also F. Capotorti, "L'extinction et la suspension des traités", *Recueil des cours de l'Académie de droit international de La Haye, 1971-III*, vol. 134, p. 509, and Sadat-Akhavi (footnote 21 above), pp. 57–59.

[426] That the *inter se* agreement must not add to ("affect") the performance of their obligations by the other parties was incorporated in article 41 in response to a statement by Mr. Paredes. Mr. Paredes remarked that it was essential that an *inter se* agreement should not impose greater obligations or burdens on them. He gave the example that an *inter se* agreement might make provision for navigation by vessels of deeper draught or for navigation at other periods of the year than those specified in the original treaty and so impose greater obligations or burdens on other parties to the original treaty that were not parties to the *inter se* agreement. See summary record of the Commission's 764th meeting, *Yearbook ... 1964*, vol. I, p. 272, para. 79. See also the commentary to article 22 (*b*) of the draft convention on the law of treaties in the Harvard Research in International Law (footnote 353 above), pp. 1016–1024.

not been any suggestion that they have been made *a priori* in violation of GATT.[427]

306. On the other hand, GATT contains no rules that would apply should two or more members wish to conclude an *inter se* agreement to *restrict* trade between themselves. In the absence of such rules, there appears to be nothing to prevent members from concluding an *inter se* agreement to the effect that in their dealings with each other they will not invoke, say, articles III and XI of GATT[428] with respect to what they feel to be justified trade restrictions. Such an agreement would affect the rights and obligations of the other members of WTO but, as it would do so beneficially, the condition set in article 41 would be satisfied.[429]

307. Sometimes an *inter se* agreement might not directly infringe the rights of the other parties, though it may nevertheless have the potential to damage their interests.[430] It is generally assumed, however, that participation in a multilateral treaty creates a community of interests and a solidarity implying an entitlement for the parties to express their views on the compatibility of special arrangements concluded between some of them with the overall regime of the treaty. This is particularly the case for treaties aimed at unifying the rules of law in specific domains. This idea is reflected in article 311, paragraph 3, of the United Nations Convention on the Law of the Sea, which provides that *inter se* agreements applicable to relations between parties to the Convention must not affect the "*application of the [Convention's] basic principles**" or the other States parties' "enjoyment … of their rights or the performance of their obligations under [the] Convention".

308. What the "obligation of solidarity" amounts to is, of course, difficult to say *in abstracto*. In most cases, this is likely to be covered by the second condition laid out in article 41, according to which an *inter se* agreement may not "relate to a provision, derogation from which is incompatible with the effective execution of the object and purpose of the treaty as a whole".

(b) *Preservation of the object and purpose of the multilateral treaty*

309. The concept of incompatibility with the object and purpose of a treaty was first set forth by the International Court of Justice in the *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide* case (1951)[431] and has been increasingly accepted and applied, in particular to reservations. The same concept also has a prominent place in several articles of the 1969 Vienna Convention: articles 18 (obligation not to defeat the object and purpose), 19 (reservations), 31 (interpretation), 41 (*inter se* agreements), 58 (termination and suspension by *inter se* agreement) and 60 (material breach). The concept of object and purpose had received little systematic treatment in the literature until the Commission's reports on reservations addressed these questions in depth.[432] The concerns expressed in those debates are not essentially different from concerns that also seem relevant for determining the permissibility of *inter se* agreements under article 41, as well as under article 58, paragraph (1) (*b*) (ii), which deals with the suspension of the operation of a multilateral treaty.[433]

310. During preparatory work for the 1969 Vienna Convention, debate in the Commission focused on the distinction between treaties containing (merely) reciprocal obligations and treaties whose obligations were non-reciprocal—that is to say, of a "more absolute type". In the former case, *inter se* agreements did not pose any grave problems. Their permissibility followed from the fact that they normally only affected bilateral relationships or, if their effects went further, were positive from the perspective of the other parties.[434] The *inter se* agreement could be seen as a development of the treaty, fully in line with its ethos and its object and purpose.

311. However, in the case of obligations that could not be broken down into bilateral relationships, an *inter se* agreement might more easily be understood to be contrary to the object and purpose of a treaty. During the Commission's discussions, non-reciprocal treaties were characterized in terms of the "absolute", "integral" or "interdependent" nature of their obligations.[435] Although none of this language ("absolute", "integral", "interdependent") found its way into article 41, there has been wide agreement that not all treaties have the same character in this regard. Thus, for example, article 60, paragraph 2 (*c*), of the 1969 Vienna Convention provides a special rule on invoking breach where "the treaty is of such a character that a material breach of its provisions by one party radically changes the position of every party

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[427] See, for example, *Turkey—Restrictions on Imports of Textile and Clothing Products* (footnote 88 above), para. 9.97 ("we are well aware that regional trade agreements have greatly increased in number and importance since the establishment of GATT 1947 and today cover a significant proportion of world trade"). As of January 2005, WTO had been notified of 312 RTAs, 170 of which remained in force. See I. van Damme, "What role is there for regional international law in the interpretation of the WTO agreements?", in L. Bartels and F. Ortino (eds.), *Regional Trade Agreements and the WTO Legal System*, Oxford, Oxford University Press, 2006, p. 553.

[428] These articles respectively proscribe discrimination against imported products in favour of domestic products and the application of quantitative restrictions at frontiers.

[429] See Pauwelyn, "The role of public international law in the WTO…" (footnote 43 above), pp. 548–549.

[430] See the statements by Mr. Verdross and Mr. Castrén at the Commission's 860th meeting, *Yearbook … 1966*, vol. I (Part II), p. 126, paras. 58–59.

[431] *Reservations to the Convention on Genocide* (see footnote 326 above).

[432] For a recent exposé and discussion, see the tenth report on reservations to treaties by Alain Pellet, Special Rapporteur (A/CN.4/558 and Add.1–2) (footnote 402 above). See also I. Buffard and K. Zemanek, "The 'object and purpose' of a treaty: an enigma?", *Austrian Review of International and European Law*, vol. 3, No. 3 (1998), p. 311, and J. Klabbers, "Some problems regarding the object and purpose of treaties", *The Finnish Yearbook of International Law*, vol. 8 (1997), p. 138.

[433] See article 55 (art. 58 of the 1969 Vienna Convention) of the draft articles on the law of treaties with commentaries, *Yearbook … 1966*, vol. II, document A/6309/Rev.1, part II, pp. 252.

[434] See, for example, the third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur (A/CN.4/115) (footnote 139 above), pp. 43–44, paras. 88–89.

[435] See, generally, *ibid.*, pp. 41–45, paras. 77–94; *Yearbook … 1964*, vol. II, document A/5809, p. 188, para. (10); third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (footnote 323 above), p. 39, para. (17). See also paras. 109 and 262 above.

with respect to the further performance of its obligations under the treaty". Likewise, article 42 (*b*) (ii) of the Commission's draft articles on responsibility of States for internationally wrongful acts (2001) makes reference to what the commentary calls "interdependent obligations"—that is, obligations the breach of which "is of such a character as radically to change the position of all the other States to which the obligation is owed".[436]

312. There is no doubt about the relevance of the distinction between the two groups of treaties. The 1961 Vienna Convention on Diplomatic Relations and the 1963 Vienna Convention on Consular Relations are examples of treaties containing essentially reciprocal obligations. The parties may derogate at will from those obligations in their relations *inter se*. This is not so in regard to a disarmament treaty, for example, where the performance by one party of its obligations is a prerequisite for the performance by the other parties of theirs. A breach by one party is in effect a breach *vis-à-vis* all the other parties.[437] A human rights convention, for its part, is an absolute or "integral" treaty. The obligations it imposes are independent of any expectation of reciprocity or performance on the part of other parties of their obligations.

313. It is above all *inter se* agreements modifying treaties containing such non-reciprocal (*i.e.* "integral", "interdependent" or "absolute") obligations that are likely to affect the execution of the object and purpose of the treaties and that are, therefore, prohibited under article 41, paragraph 1 (*b*) (ii), of the 1969 Vienna Convention. Nevertheless, the question of the procedure through which "incompatibility" is determined will remain. According to the main rule set out by the International Court of Justice in its advisory opinion concerning *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide*, each State will appraise for itself whether or not a reservation made by a State is compatible with the object and purpose of a treaty and decide what action it should take regarding that reservation.[438] The matter is left to the discretion of the parties—although the use of that discretion is, of course, subjected to the duty of good faith.[439] There is no evidence that the situation as regards *inter se* agreements is any different: it is open to any party to a multilateral treaty to object to the conclusion of an *inter se* agreement on the ground that the agreement is likely to frustrate execution of the object and purpose of the treaty.[440]

(c) *Other situations*

314. There may of course be situations where the drafters of a multilateral treaty, motivated by a desire to uphold and consolidate its rules, insert clauses that prohibit the parties from concluding agreements that derogate from those rules or insert clauses guaranteeing the primacy of a rule contained in the multilateral treaty over a rule contained in a special agreement, thereby establishing a hierarchy of treaty rules. The 1982 United Nations Convention on the Law of the Sea is an example of this. Its article 311, paragraph 6, provides that "States Parties agree that there shall be no amendments to the basic principle relating to the common heritage of mankind set forth in article 136 and that they shall not be party to any agreement in derogation thereof".[441]

315. Another conflict clause might allow the parties to conclude *inter se* agreements provided that they do not contravene the rules established by the original treaty. This is the case, for example, with article 19 of the Paris Convention for the Protection of Industrial Property, amended in 1979. However, in most cases treaties do not contain clauses permitting or prohibiting *inter se* agreements. In this case, the faculty of the parties to conclude *inter se* agreements will have to be determined in accordance with the criteria in article 41, the point of which is to allow modification when and to the extent that it does not undermine the unity or effectiveness of the treaty regime.

2. Notification of the other parties and their reaction

316. According to article 41, paragraph 2, of the 1969 Vienna Convention, the other parties must be notified of an *inter se* agreement and notification must be given in time for those parties to react.[442] In 1964, the Commission was of the view that notification should be given of every proposal to conclude an *inter se* agreement, but subsequently, following comments from the Government of the Netherlands, it decided that the requirement should be to notify the other parties of every intention to conclude an *inter se* agreement except when the treaty itself made provision for the conclusion of such agreements.[443] In the latter instance, the treaty may require notification both of an *inter se* agreement and of the termination of such an agreement. For example, the European Convention on Recognition and Enforcement of Decisions concerning Custody of Children and on Restoration of Custody of

[436] See the commentary to article 42 of the draft articles on responsibility of States for internationally wrongful acts (especially para. (13)), *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 119. The examples mentioned are those of "a disarmament treaty, a nuclear-free zone treaty, or any other treaty where each party's performance is effectively conditioned upon and requires the performance of each of the others".

[437] For an example, see *Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, p. 255, para. (8). See also the commentary to article 42 (*b*) (ii) of the Commission's draft articles on responsibility of States for internationally wrongful acts (especially para. (13)), *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 117.

[438] *Reservations to the Convention on Genocide* (see footnote 326 above), p. 26.

[439] See Reuter, *Introduction au droit des traités*, 2nd rev. ed. (footnote 75 above), pp. 74–75.

[440] See D. N. Hutchinson, "Solidarity and breaches of multilateral treaties", *British Year Book of International Law 1988*, vol. 59, p. 190.

[441] See also the commentary to article 311, para. 6, in M. H. Nordquist (ed.), *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. V, Dordrecht, Martinus Nijhoff, 1989, pp. 241 *et seq.*

[442] This provision was, at the time of its adoption, an example of the progressive development of international law rather than of codification. See the statement by Sir Humphrey Waldock at the Commission's 764th meeting, *Yearbook ... 1964*, vol. I, pp. 273–274, para. 102. This view is borne out by the fact that, when the Commission discussed notification, some members opined that notification was necessary only in the case of *inter se* agreements not provided for in multilateral treaties, while others considered it necessary only in the case of a multilateral treaty concluded between a small number of States. See the statements by Mr. Ago at the Commission's 754th meeting, held on 29 June 1964, *ibid.*, p. 203, para. 85, and by Mr. Tunkin at the Commission's 764th meeting, *ibid.*, p. 273, para. 97.

[443] See the sixth report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/186 and Add.1–7) (footnote 34 above), p. 87, para. 3.

Children, of 20 May 1980, provides, in article 20, paragraph 2, that when two or more contracting States have by some means, including an agreement between themselves, created a special system of recognition or enforcement, they may apply that system in place of the Convention or of any part of it. Parties to the Convention wishing to take that step must "notify their decision to the Secretary General of the Council of Europe" and "[a]ny alteration or revocation of [their] decision must also be notified".

317. Article 41, paragraph 2, provides that parties wishing to conclude an *inter se* agreement ("the parties in question") must notify the other parties of their intention. While notification may be given by one of the "parties in question", a treaty may provide that it be given through the medium of the depositary of the treaty.[444] Although notification is usually given by States or the depositaries of treaties, cases have arisen in practice where notification can be considered to have been given because the intention to modify is universally apparent from the object of the *inter se* agreement.

318. If a notification is to protect the interests of the other parties, it must reach them in time. Some Commission members were of the opinion that the other parties should be informed immediately of the intention to conclude an *inter se* agreement.[445] Others felt that, quite apart from the difficulty of communicating an intention, information should be provided once the agreement had been concluded and published.[446] The Commission decided that the parties should be given time to react and that that could only be done if concrete proposals were communicated to them, whence the wording in paragraph 2 to the effect that the other parties must be informed of the "modification to the treaty for which [the agreement] provides". In other words, notification must be given at a relatively advanced stage in the negotiation of the *inter se* agreement but nevertheless sufficiently prior to its conclusion so as to enable a meaningful reaction.

3. Consequences for breach of the multilateral treaty by parties to an *inter se* agreement

319. The text of article 41 leaves two questions open. The first is that of the legal effect of the conclusion of an *inter se* agreement in violation of article 41, paragraph 1, that constitutes a material breach of the treaty; the second is that of the legal effect of an objection made after notification has been given under article 41, paragraph 2.[447] However, it seems clear that an *inter se* agreement concluded in deviation from the original agreement is not thereby invalidated. It would seem to follow from the considerations set out above regarding a conflict of treaties with non-identical parties that it should depend on the interpretation of the original treaty as to what consequences should follow. In addition, the consequences of breach of treaty are dealt with in article 60 of the 1969 Vienna Convention and through the regime of State responsibility. This is not the place to deal with these issues. Nevertheless, two comments may be in order. First, the collective termination or suspension of the original treaty make take place through the unanimous agreement of those parties to the original treaty that are not parties to the modification if the latter constitutes a material breach—*i.e.* relates to a provision that is essential to its execution. Second, individual decisions to suspend the operation of a treaty in whole or in part are permitted in two cases. A party that is especially affected by an (illegal) modification may suspend the operation of the treaty in relations between itself and the parties to the offending *inter se* agreement. And when a material breach constituted by a modification radically changes the position of every other party with respect to the performance of their obligations under the treaty, any of the affected parties may similarly suspend the operation of the treaty with respect to itself.[448]

4. Conclusion on successive agreements

320. The law on conflicts between successive agreements is largely based on presumptions about party intent and the object and purpose of treaties. Conflict resolution here is inextricable from treaty interpretation. Neither the earlier nor the later treaty enjoys automatic preference. It is by now well settled that in cases of conflict, the issue is not with invalidity but with relative priority between treaties. That approach is also reflected in article 30 of the 1969 Vienna Convention, which, while largely codifying an open-ended earlier practice, leaves some of the most difficult questions open. For example, it is clearly unsatisfactory that a party that has concluded incompatible agreements will have the right of election as to which agreement it will fulfil and which parties will have to satisfy themselves with State responsibility.

321. The question of special types of treaties that might enjoy priority owing to their nature was also left open by the 1969 Vienna Convention. While Lauterpacht and Fitzmaurice both felt that there was reason to assume the existence of such categories—those labelled by the latter "integral" or "interdependent" treaties—article 30 refrains from mentioning them, perhaps because Waldock assumed (wrongly) that the problem would be taken care of by the provision on *jus cogens*. In any case, this does not accord with some of the practice in regard to human rights treaties. However, something of this debate was reflected in the limits that article 41 places on *inter se* modification—limits which, by virtue of article 30, paragraph 5, also apply to other subsequent treaties and which might also have some relevance (as suggested above) in the discussion of disconnection clauses.

322. The faculty to conclude *inter se* agreements is an important and widely accepted instrument through which a limited number of parties to a treaty may seek to guarantee the most appropriate and effective implementation of the original treaty between themselves. Nevertheless, article 41 of the 1969 Vienna Convention also limits the

[444] See the commentary to article 311, para. 4, of the United Nations Convention on the Law of the Sea in Nordquist (ed.) (footnote 441 above), p. 240.

[445] See the version of draft article 67 (the future article 41) proposed by Sir Humphrey Waldock at the Commission's 860th meeting, *Yearbook ... 1966*, vol. I (Part II), p. 123.

[446] See the statement by Mr. Reuter at the Commission's 754th meeting, *Yearbook ... 1964*, vol. I, p. 201, para. 51.

[447] See the statement by Mr. Briggs at the Commission's 860th meeting, *Yearbook ... 1966*, vol. I (Part II), p. 126, paras. 71 *et seq.*

[448] Article 60, paragraph 2, of the 1969 Vienna Convention. See also, for example, Reuter, *Introduction au droit des traités*, 2nd rev. ed. (footnote 75 above), pp. 161–162.

faculty to conclude *inter se* agreements, especially if they would go too firmly against the object and purpose of the original treaty.

323. Much of the law is open to *ad hoc* regulation by the adoption of specific conflict clauses. In practice, however, States have often been reluctant to establish clear hierarchies in this way. The turn to "coordination" in the application of several treaties may seem a practical way to proceed, especially when the treaties form part of what has been called a "regime"—that is, are institutionally linked and intended to achieve parallel objectives. However, such coordination is problematic across regimes, that is to say, where a "legislative" approach to treaty conflict seems least pertinent. Those are also the situations in which the *lex posterior* rule has least application. In such situations, the emphasis should be on guaranteeing the rights established in the relevant conventions. If a right should be overruled because of its incompatibility with another treaty, then State responsibility should follow. It is uncertain whether this is a realistic expectation within regime-specific treaty "management". For the settlement of conflicts across regimes and even *inside* regimes when the treaties have established clearly specified (subjective) rights, recourse to general dispute settlement organs would seem the best alternative.

Chapter IV

Relations of importance: Article 103 of the Charter of the United Nations, *jus cogens* and obligations *erga omnes* as conflicting rules

324. Much of the concern over the fragmentation of international law emerges from awareness of the "horizontal" nature of the international legal system. The rules and principles of international law are not in a hierarchical relationship with each other. Nor are the different sources (treaty, custom, general principles of law) ranked in any general order of priority. This is a key difference between the international and domestic legal systems. Whereas domestic law is organized in a strictly hierarchical way, with the constitution regulating the operation of the system at the highest level, there is no such formal constitution in international law and, consequently, no *general* order of precedence among international legal rules.

325. Nevertheless, this has never meant that one could not, in particular cases, decide on an order of precedence among conflicting rules. In the previous chapters we have seen how relations of speciality *versus* generality or those of temporal succession are sometimes used as criteria on the basis of which one rule may be preferred over another. Nevertheless, we also saw how the operation of those relationships cannot be determined abstractly. The applicability of *lex specialis* or *lex posterior* depended on a prior assessment of the relevance of a particular criterion. This reflected the pragmatic sense that some criteria are, in particular contexts, more important than others, for example because they better secure important interests or protect important values.

326. There has never been any doubt about the fact that some considerations in the international world are more important than others and must be legally recognized as such—although how that sense of importance could be articulated has been the subject of lasting academic controversy. Here there is no suggestion that a position be taken on that controversy—for example, on the role of natural law or political justice in international law or on whether or to what extent international law might be in a process of "constitutionalization". Irrespective of the difficulty of finding a general vocabulary that would express the role of the sense of importance of particular norms, the practice of international law has always recognized the presence of some norms that are superior to other norms and must therefore be given effect. It is not without significance that the International Court of Justice could, in the *Corfu Channel* case (1949), limit State sovereignty by what it called "elementary considerations of humanity"[449] and, in *Legality of the Threat or Use of Nuclear Weapons*, presume the existence of "intransgressible principles of international customary law",[450] without this having raised fundamental objections.

327. There is an important practice that gives effect to the informal sense that some norms are more important than others and that, in cases of conflict, those important norms should be given effect. In the absence of a general theory about where to derive this sense of importance from, practice has developed a vocabulary that gives expression to something like an informal hierarchy in international law. This chapter deals with three aspects of that vocabulary: Article 103 of the Charter of the United Nations and the concepts of peremptory norms (*jus cogens*) and obligations *erga omnes*.

A. Article 103 of the Charter of the United Nations

328. The Covenant of the League of Nations contained a provision suggesting that the Covenant itself was "higher law" in respect to other international obligations.[451] Article 20 of the Covenant was drafted as follows:

> The Members of the League severally agree that this Covenant is accepted as abrogating all obligations or understandings *inter se* which are inconsistent with the terms thereof, and solemnly undertake that they will not hereafter enter into any engagements inconsistent with the terms thereof.
>
> In case any Member of the League shall, before becoming a Member of the League, have undertaken any obligations inconsistent with the terms of this Covenant, it shall be the duty of such Member to take immediate steps to procure its release from such obligations.

329. This provision was the starting point for drafting Article 103 of the Charter of the United Nations. At San

[449] *Corfu Channel case*, Judgment of 9 April 1949, *I.C.J. Reports 1949*, p. 4, at p. 22.

[450] *Legality of the Threat or Use of Nuclear Weapons* (see footnote 122 above), p. 257, para. 79.

[451] See especially H, Lauterpacht, "The Covenant as the 'higher law'", *British Year Book of International Law 1936*, vol. 17, p. 54.

Francisco there was already a general understanding that obligations under the Charter should prevail over Members' other treaty commitments.[452] After minor disagreements over the formulation of this principle, the present text was adopted unanimously and reads as follows:

> In the event of a conflict between the obligations of the Members of the United Nations under the present Charter and their obligations under any other international agreement, their obligations under the present Charter shall prevail.

330. Unlike the Covenant, Article 103 also extends the priority of Charter provisions to Members' future agreements, as well as to their agreements with non-members of the United Nations.

1. What are the prevailing obligations?

331. Article 103 does not say that the *Charter* prevails, but refers to *obligations under the Charter*. Apart from the rights and obligations in the Charter itself, this also covers duties based on binding decisions by United Nations bodies. The most important case is that of Article 25, which obliges Member States to accept and carry out resolutions of the Security Council that have been adopted under Chapter VII of the Charter. Even if the primacy of Security Council decisions under Article 103 is not expressly spelled out in the Charter, it has been widely accepted in practice as well as in doctrine.[453] The question has sometimes been raised of whether Security Council resolutions adopted *ultra vires* also prevail by virtue of Article 103.[454] Since obligations for Member States of the United Nations can only derive from resolutions that are taken within the limits of its powers, decisions *ultra vires* do not give rise to any obligations to begin with. Hence, no conflict exists. The issue is similar with regard to non-binding resolutions adopted by United Nations organs, including the Security Council. These are not covered by Article 103.[455]

332. Finally, the Security Council often suggests that its resolutions prevail not only over other international obligations but also over private law contracts, licences, permits and the like.[456] In principle, there is nothing troubling in viewing agreements between States subjected to municipal law as international agreements for present purposes. But as regards the effect of Security Council resolutions on pure private law instruments, the assumption must be that they are not automatically invalidated but that the obligation is on States not to give effect to such contracts. This may give rise to difficult issues of liability and compensation for non-performance, but here it is not necessary to enter into that set of problems.

2. What does it mean for one obligation to prevail over another?

333. What happens to an obligation over which Article 103 establishes precedence? Most commentators agree that the question here is not of validity but of priority. The lower-ranking rule is merely set aside to the extent that it conflicts with the obligation under Article 103.[457] This was how Waldock saw the matter during the Commission's debates on article 30 of the 1969 Vienna Convention: "[T]he very language of Article 103 makes it clear that it prescribes the *priority* of the Charter, not the *invalidity* of treaties conflicting with it."[458]

334. A small number of authors have developed a more extensive view of the effects of Article 103—that is, the invalidity of the conflicting treaty or obligation—on the basis of a view of the Charter as a "constitution".[459] A clear-cut answer to this question (priority or invalidity?) cannot be deduced from the text of Article 103. Yet the word "prevail" does not grammatically imply that the lower-ranking provision would become automatically null and void, nor even suspended. The State is merely prohibited from fulfilling an obligation arising under that other norm. Article 103 says literally that in the event of a conflict, the State in question should fulfil its obligation under the Charter and perform its duties under other agreements in as far as compatible with obligations under the Charter.[460] This also accords with the drafting materials for the Charter, which state that

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[452] R. Bernhardt, "Article 103", in B. Simma (ed.), *The Charter of the United Nations: A Commentary*, 2nd ed., vol. II, New York, Oxford University Press, 2002, p. 1292.

[453] To use the words of Bernhardt, "[a]s far as [M]embers of the [United Nations] are bound by Art. 25 'to accept and carry out the decisions of the Security Council in accordance with the present Charter', they are also bound, according to Art. 103, to give these obligations priority over any other commitments" (*ibid.*, pp. 1295–1296). See further, for example, Dupuy, "L'unité de l'ordre juridique international…" (footnote 14 above), p. 240, and Zemanek, "The legal foundations of the international system…" (footnote 31 above), p. 230. For an alternative view, see D. Bowett, "The impact of Security Council decisions on dispute settlement procedures", EJIL, vol. 5 (1994), p. 89, at p. 92: "A Council decision is *not* a treaty obligation. The obligation to comply may be, but the decision *per se* is not."

[454] S. Lamb, "Legal limits to United Nations Security Council powers", in G.S. Goodwin-Gill and S. Talmon (eds.), *The Reality of International Law: Essays in Honour of Ian Brownlie,* Oxford, Clarendon Press, 1999, p. 361; E. De Wet, *The Chapter VII Powers of the United Nations Security Council,* Oxford, Hart, 2005; N. Blokker, "Is the authorization authorized? Powers and practice of the UN Security Council to authorize the use of force by 'coalitions of the able and willing'", EJIL, vol. 11, No. 3 (2000), p. 541; G. Nolte, "The limits of the Security Council's powers and its functions in the international legal system: some reflections", in M. Byers (ed.), *The Role of Law in International Politics: Essays in International Relations and International Law*, Oxford, Oxford University Press, 2000, p. 315.

[455] For a discussion, see R. Kolb, "Does Article 103 of the Charter of the United Nations apply only to decisions or also to authorizations adopted by the Security Council?", *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht*, vol. 64 (2004), p. 21.

[456] See, for example, Security Council resolutions 1160 (1998), 1127 (1997), 1173 (1998), 1267 (1999) and 1298 (2000).

[457] See, for example, Dupuy, "L'unité de l'ordre juridique international…" (footnote 14 above), p. 243; Zemanek, "The legal foundations of the international system…" (footnote 31 above), p. 230.

[458] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (see footnote 323 above), p. 36, para. (8) of the commentary to draft article 65.

[459] See Bernhardt, "Article 103" (footnote 452 above), p. 1297. Another commentator has argued that conflicts between obligations under treaties and obligations under the Charter lead to the same result as conflicts with *jus cogens*—invalidity. See B. Fassbender, "The United Nations Charter as constitution of the international community", *Columbia Journal of Transnational Law*, vol. 36 (1998), p. 590. See also McNair (footnote 58 above), p. 217.

[460] See further E. Sciso, "On Article 103 of the Charter of the United Nations in the light of the Vienna Convention on the Law of Treaties", *Österreichische Zeitschrift für öffentliches Recht und Völkerrecht*, vol. 38 (1987), p. 161, at pp. 169–170, and P.-M. Dupuy, "The constitutional dimension of the Charter of the United Nations revisited", *Max Planck Yearbook of United Nations Law*, vol. 1 (1997), p. 1, at pp. 13–15. Goodrich and Hambro conclude that "[i]t is to be noted that this Article [103] does not provide for the automatic

it would be enough that a conflict should arise from the carrying out of an obligation of the Charter. It is immaterial whether the conflict arise because of intrinsic inconsistency between the two categories of obligations or as the result of the application of the provisions of the Charter under given circumstances…[461]

335. A conflict between an obligation under the Charter and some other obligation may arise in a purely *ad hoc* manner. This is what happened with the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation in the *Lockerbie* case, for example.[462] It is hard to see how the drafters could have intended that such a conflict would render null and void the conflicting treaty—in the *Lockerbie* case, the whole of the Convention. This would be senseless. From a teleological perspective, a better view is to see Article 103 as a means of ensuring that Charter obligations can be performed effectively, not abolishing other treaty regimes, however incidental the conflict might be.

336. In another recent case, the High Court of Justice in the United Kingdom delivered its judgment affirming the superiority of Security Council resolutions over the human rights obligations of the United Kingdom.[463] The claimant—a dual citizen of Iraq and the United Kingdom—had been detained by British forces in Iraq for 10 months without being charged. He contended that the detention was in breach of his rights under the Human Rights Act 1998. From the viewpoint of normative conflicts, the judgment is particularly relevant in two regards. First, the Court tested the legality of the claimant's detention against what it called "the context of international human rights law".[464] However, the Court read the detention itself as a human rights measure in a way that enabled it to bypass the question of conflict:

> The Security Council, charged as it is with primary responsibility for maintaining international peace and security, has itself determined that a multinational force is required. Its objective is to restore such security as will provide effective protection for human rights for those within Iraq. Those who choose to assist the Security Council in that purpose are authorised to take those steps, which include detention, necessary for its achievement.[465]

337. The Court added, nevertheless, that a hierarchy was also implied:

> For the purposes of restoring and maintaining that peace and security without which there can be no human rights within Iraq, the Security Council has authorised such detention as is necessary for imperative reasons of security in accordance with Article 78 of Geneva IV.[466]

It may be noteworthy that in "testing the legality of the detention", the Court never took up the question of possible *jus cogens*.[467]

338. Second, the Court, discussing the relationship between the Charter of the United Nations and all other treaty obligations, concluded that Article 103 of the Charter also embraces resolutions of the Security Council and that actions taken in pursuance of them prevail over other treaty obligations—even of a human rights character—such as those deriving from the European Convention on Human Rights.[468] Thus, the Court did not find a violation of the claimant's rights.

339. Finally, the primacy of Article 103 is expressly mentioned in article 30, paragraph 1, of the 1969 Vienna Convention:

> Subject to Article 103 of the Charter of the United Nations, the rights and obligations of States parties to successive treaties relating to the same subject-matter shall be determined in accordance with the following paragraphs.

340. The context of this provision is informative. As discussed in chapter III above, article 30—which deals with the application of "successive treaties relating to the same subject-matter"—does not presume that the treaty being set aside under it would be invalid, but merely set aside in order to apply the higher-ranking treaty and to the extent necessary. In fact, to say this is simply to point to the manner in which the hierarchical effect of obligations under the Charter differs from *jus cogens*, conflict with which renders other norms invalid or terminates them.[469]

3. Special cases

(a) *Conflicts with treaties between United Nations Member States and non-members*

341. Conflicts between obligations under the Charter and treaties concluded between Member States and non-member States of the United Nations give rise to difficult legal questions.[470] To use the words of the Commission itself, "[t]he precise effect of the provision in the relations between Members of the United Nations and non-member States may not be entirely clear".[471] Indeed, the text of Article 103 does not differentiate between obligations incurred among United Nations Member States and obligations of and towards non-member States. Inasmuch as

abrogation of obligations inconsistent with the terms of the Charter. The rule is put in such form as to be operative only when there is an actual conflict" (L.M. Goodrich and E. Hambro, *Charter of the United Nations: Commentary and Documents*, 2nd rev. ed., London, Stevens and Sons, 1949, p. 519).

[461] United Nations Conference on International Organization, Report of the Rapporteur of Committee IV/2, document 933, IV/2/42 (2) (*Documents of the United Nations Conference on International Organization*, San Francisco, 1945, vol. XIII, p. 703, at pp. 707–708), as quoted in Goodrich and Hambro (see footnote 460 above), p. 519.

[462] See section A.4 below, especially the *Lockerbie* case.

[463] *The Queen (on the application of Hilal Abdul-Razzaq Ali Al-Jedda) v. Secretary of State for Defence*, judgment of 12 August 2005, No. CO/3673/2005, [2005] EWHC 1809 (Admin).

[464] *Ibid.*, see paras. 94 *et seq.* of the judgment.

[465] *Ibid.*, para. 104.

[466] *Ibid.*, para. 108.

[467] Nevertheless, Mr. Al-Jedda was granted permission to appeal and the case was heard by the Court of Appeal in January 2006.

[468] Para. 112 of the judgment in *The Queen (on the application of Hilal Abdul-Razzaq Ali Al-Jedda) v. Secretary of State for Defence* (see footnote 463 above).

[469] It has also been argued that "[a] clear solution to the problem of conflicting obligations appears possible where a Charter provision reflects a norm of *ius cogens*. In this case, conflicting obligations are and remain invalid" (Bernhardt, "Article 103" (see footnote 452 above), p. 1298). Nevertheless, the source of invalidity in such a situation is not the Charter of the United Nations, but the rule which states that all agreements incompatible with *jus cogens* are invalid.

[470] Admittedly, owing to the fact that very few States remain outside the circle of Members of the United Nations, these questions are more theoretical than practical.

[471] Draft articles on the law of treaties, *Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, p. 214, para. (3) of the commentary to draft article 26.

one reads the Charter as a "constitutional" document, then there is of course no problem. For example, Bernhardt solves the question in a straightforward manner:

> [T]here are good reasons for assuming that treaties concluded with third States that are in clear or at least apparent contradiction to the Charter are not only unenforceable but also invalid with respect to such States. The Charter has become the "constitution" of the international community, and third States must, in their treaty relations and otherwise, respect the obligations arising under the Charter for UN [M]embers.[472]

342. In the same vein, Goodrich and Hambro wrote in their early commentary to the Charter:

> The Charter … assumes the character of basic law of the international community. Non-[m]embers, while they have not formally accepted it, are nevertheless expected to recognize this law as one of the facts of international life and to adjust themselves to it.[473]

343. Yet it remains the case that non-members are not formally bound by the Charter, which for them remains *res inter alios acta*.[474] In the normal course of events, Member States should not be able to rid themselves of the duty to perform their treaty obligations towards non-member States by reliance on Article 103.[475] Nevertheless, a strong doctrinal opinion tends to affirm, at least for United Nations Members, the absolute primacy of Charter obligations over conflicting obligations with non-members of the United Nations.[476] This may perhaps be rationalized by reference to article 30, paragraph 1, of the 1969 Vienna Convention, which may be read as acceptance by parties to the Convention of the Charter's pre-eminence.[477] In any case, this leaves open any responsibility that will arise towards non-members as a result of the application of Article 103.

(b) *Conflicts with norms of customary international law of a non-peremptory character*

344. The wording of Article 103, reading "obligations under any other international agreement", implies that only conventional obligations are targeted by that provision. Opinions on whether customary law is also covered are split, however. During the drafting of the Charter, a formula according to which *all* other commitments, including those arising under customary law, were to be superseded by the Charter was ultimately omitted from the final text.[478] This suggests the conclusion that, at least for the drafters, Article 103 covered only other treaties. This does not, however, exclude the possibility of later developments in the law. Indeed, at least those who uphold the "constitutional" vision claim that Article 103 extends to conflicting customary law as well:

> [I]t would not be correct to assume that obligations under the Charter do not also prevail in relation to these other [including customary-law-based] obligations. Article 103 must be seen in connection with Art. 25 and with the character of the Charter as the basic document and "constitution" of the international community. Therefore, the ideas underlying Art. 103 are also valid in case of conflict between Charter obligations and obligations other than those contained in treaties.[479]

345. While some have supported this view[480], others have doubted whether Article 103 elevates the Charter above customary law.[481] Two considerations might perhaps be relevant here. First, a literal interpretation renders a clear result. However expansively one interprets "international agreements", it does not cover international custom. Second, however, and as pointed out in chapter II above, as *lex generalis*, customary law normally yields to treaties as *lex specialis*—including, one would suppose, treaties establishing an international organization such as the United Nations. In any case, the practice of the Security Council has continuously been grounded in the understanding that Security Council resolutions override conflicting customary law. As the Security Council is a creation of the Charter, it would be odd if the prevailing effect of Security Council resolutions did not extend to the Charter itself. It therefore seems sound to join the prevailing opinion that Article 103 should be read extensively, so as to affirm that Charter obligations also prevail over the customary law obligations of United Nations Member States.[482]

(c) *Conflicts with norms of* jus cogens

346. If United Nations Member States are unable to draw up valid agreements in dissonance with *jus cogens*, they must also be unable to vest an international organization with the power to go against peremptory norms.

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[472] Bernhardt, "Article 103" (see footnote 452 above), p. 1298. See also, for example, Fassbender (footnote 459 above), p. 532; but for an alternative view see also J.-M. Thouvenin, "Article 103", in J.-P. Cot and A. Pellet (eds.), *La Charte des Nations Unies: Commentaire article par article*, 3rd rev. ed., Paris, Economica, 2005, p. 2133, at pp. 2136–2139 and especially p. 2146: "Il ne saurait alors être considéré, en lui-même, comme l'élément clé permettant de reconnaître à la Charte des Nations Unies les qualités d'une constitution de la communauté internationale" ("It cannot be regarded in itself as the crucial element that imbues the Charter of the United Nations with the character of a constitution for the international community").

[473] Goodrich and Hambro (see footnote 460 above), p. 519.

[474] See article 34 of the 1969 Vienna Convention. Lord McNair also confirms that even the Charter of the United Nations does not have the power to make the rules contained therein binding upon non-members. See McNair (footnote 58 above), p. 218.

[475] For further discussion see Sciso (footnote 460 above), pp. 167 *et seq.*

[476] See, for example, Daillier and Pellet, *Droit international public* (footnote 74 above); Dupuy, "L'unité de l'ordre juridique international…" (footnote 14 above), p. 241; A. L. Paulus, *Die internationale Gemeinschaft im Völkerrecht: Eine Untersuchung zur Entwicklung des Völkerrechts im Zeitalter der Globalisierung,* Munich, Beck, 2001, p. 113.

[477] The extent to which the 1969 Vienna Convention codifies customary international law is also relevant for present purposes.

[478] J. Combacau, *Le pouvoir de sanction de l'ONU: étude théorique de la coercition non militaire,* Paris, Pedone, 1974, p. 282. An early commentary on the Charter also confirms that the possibility of Charter obligations' pre-eminence over customary law obligations was not even considered as a question to be answered. See Goodrich and Hambro (footnote 460 above), pp. 517–518.

[479] Bernhardt, "Article 103" (see footnote 452 above), pp. 1298–1299.

[480] See, for example, A. Kaczorowska, *Public International Law,* London, Old Bailey Press, 2002, p. 21, where she states that "[a] number of commentators have suggested that this provision would apply equally to inconsistent customary law". Unfortunately, no references are provided.

[481] See, for example, N. D. White and A. Abass, "Countermeasures and sanctions", in M. D. Evans (ed.), *International Law*, Oxford, Oxford University Press, 2003, p. 505, at p. 518, arguing that "Article 103 gives obligations arising out of the [Charter of the United Nations] pre-eminence over obligations arising under any other international treaty, though it is not clear that this affects [M]ember States' customary rights".

[482] See, for example, *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, Provisional Measures, Order of 13 September 1993, *I.C.J. Reports 1993*, p. 325, at p. 440, para. 100 (separate opinion of Judge Lauterpacht).

Indeed, both doctrine and practice unequivocally confirm that conflicts between the Charter of the United Nations and norms of *jus cogens* result not in the Charter obligations' pre-eminence, but in their invalidity.[483] In this sense, the Charter is an international agreement like any other treaty. This is particularly relevant in relation to resolutions of the Security Council, which has more than once been accused of going against peremptory norms.[484]

347. This matter came up in September 2005 before the Court of First Instance of the European Communities.[485] The cases concerned the freezing of assets of individuals and entities suspected of having links to terrorists by the Council of the European Union on the basis of resolutions adopted by the Security Council. The Court decided that the European Community was competent to order the measures. For the most part, they also fell outside the scope of judicial review. The judgment is noteworthy in two aspects.

348. First, the Court found that, according to international law, the obligations of United Nations Member States under the Charter prevail over any other obligation, including those under the European Convention on Human Rights and the Treaty establishing the European Community. This paramountcy extended to decisions of the Security Council:

> [T]he resolutions of the Security Council at issue fall, in principle, outside the ambit of the Court's judicial review and … the Court has no authority to call in question, even indirectly, their lawfulness in the light of Community law. On the contrary, the Court is bound, so far as possible, to interpret and apply that law in a manner compatible with the obligations of the Member States under the Charter of the United Nations.[486]

349. Second, however, this paramountcy was not absolute. In the words of the Court:

> International law … permits the inference that there exists one limit to the principle that resolutions of the Security Council have binding effect: namely, that they must observe the fundamental peremptory provisions of *jus cogens*. If they fail to do so, however improbable that may be, they would bind neither the Member States of the United Nations nor, in consequence, the Community.[487]

350. In its subsequent analysis of the question of whether freezing applicants' rights constituted a breach of *jus cogens*, the Court found in the negative.

[483] See, for example, Fassbender (footnote 459 above), pp. 590 *et seq.*

[484] See, for example, Zemanek, "The legal foundations of the international system…" (footnote 31 above), p. 231 and the chapter on *jus cogens*.

[485] Judgments in two cases: judgments of the Court of First Instance of 21 September 2005 in case T-306/01, *Ahmed Ali Yusuf and Al Barakaat International Foundation v. Council of the European Union and Commission of the European Communities,* and case T-315/01, *Yassin Abdullah Kadi v. Council of the European Union and Commission of the European Communities*, *Digest of case-law 2005*, pp. 3533 and 3649, respectively.

[486] Case T-306/01, *Ahmed Ali Yusuf and Al Barakaat International Foundation v. Council of the European Union and Commission of the European Communities*, *ibid*., p. 3626, para. 276. The Court also added that although it is not a member of the United Nations, the Community must also be considered to be bound by the obligations flowing from the Charter of the United Nations, in the same way as are its Member States, by virtue of the Treaty establishing it. See paragraph 210 of the judgment.

[487] *Ibid.*, p. 3627, para. 281.

4. Application

351. Not surprisingly, Article 103 has most frequently been invoked in the practice of United Nations organs, especially in connection with binding decisions of the Security Council taken under Chapter VII. Although direct references to Article 103 are not very frequent, its substance appears more often.

352. Since the beginning of the 1990s, many Security Council resolutions made under Chapter VII (*i.e.* resolutions creating obligations) have underlined their priority in relation to any other obligations. A famous reference to Article 103 is to be found in resolution 670 (1990), in which the Council decided on measures against Iraq. The resolution reads:

> *Recalling* the provisions of Article 103 of the Charter,
>
> *Acting* under Chapter VII of the Charter,
>
> … *Calls upon* all States to carry out their obligations to ensure strict and complete compliance with resolution 661 (1990) …

353. Only a year later, the crisis on the territory of the former Yugoslavia led to numerous Security Council resolutions imposing an embargo, many of which emphasize, expressly or implicitly, their and prior resolutions' priority in relation to any other commitments.[488] Resolution 748 (1992) concerning Libya—to which the International Court of Justice referred in its order of 14 April 1992 (see below)—stated in paragraph 7:

> *Calls upon* all States, including States not members of the United Nations, and all international organizations, to act strictly in accordance with the provisions of the present resolution, notwithstanding the existence of any rights or obligations conferred or imposed by any international agreement…[489]

354. In its subsequent practice the Security Council has started using a standard clause, which can be found, with minor modifications, in a number of resolutions adopted under Chapter VII. For example, paragraph 7 of resolution 1267 (1999) states the following:

> [The Security Council] *Calls upon* all States to act strictly in accordance with the provisions of this resolution, notwithstanding the existence of any rights or obligations conferred or imposed by any international agreement or any contract entered into or any licence or permit granted prior to the date of coming into force of the measures imposed [by the Council]…[490]

355. Although this clause does not expressly mention Article 103, it receives its legal force from that provision. Hence it does not address only United Nations Members, but all States, as well as international and regional organizations. It covers rights and obligations based not only on treaties, but also on private contracts, licences and permits. This is natural, as it is the very rationale of sanctions regimes to influence private transactions between entities in the target State and the outside world. As pointed out above, however, this leaves the issue of private liability unanswered.

[488] See Security Council resolutions 713 (1991), 724 (1991), 727 (1992), 743 (1992), 757 (1992), 787 (1992) and 820 (1993).

[489] See also similar decisions in respect of Somalia (Security Council resolution 733 (1992)) and Liberia (Security Council resolution 788 (1992)).

[490] See also, for example, Security Council resolutions 1127 (1997), 1173 (1998), 1132 (1997) and 1298 (2000).

356. In separate opinions, members of the International Court of Justice have occasionally mentioned Article 103.[491] Before 1992, however, the Court itself had discussed it in only one decision. Yet already then, in the *Military and Paramilitary Activities in and against Nicaragua* case in 1984, the Court underlined the priority of obligations under the Charter over other treaty obligations.[492] Article 103 was given full attention in the *Lockerbie* case (1992).[493] The Governments of the United Kingdom and the United States had requested Libya to surrender certain individuals in connection with investigations into the destruction of an aeroplane over the village of Lockerbie in Scotland. The Security Council, acting under Chapter VII of the Charter, supported the measures to be taken against Libya, which in turn considered the requests of the two above-mentioned Governments incompatible with the Montreal Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation and submitted the dispute to the International Court of Justice.

357. At first, Libya asked the Court to indicate provisional measures, whereas the respondents argued that a binding decision of the Security Council did not permit such an indication. In its order of 14 April 1992 the Court stated:

> 39. Whereas both Libya and the United Kingdom, as Members of the United Nations, are obliged to accept and carry out the decisions of the Security Council in accordance with Article 25 of the Charter; whereas the Court, which is at the stage of proceedings on provisional measures, considers that *prima facie* this obligation extends to the decision contained in resolution 748 (1992); and whereas, in accordance with Article 103 of the Charter, the obligations of the Parties in that respect prevail over their obligations under any other international agreement, including the Montreal Convention;
>
> 40. Whereas the Court, while thus not at this stage called upon to determine definitively the legal effect of Security Council resolution 748 (1992), considers that, whatever the situation previous to the adoption of that resolution, the rights claimed by Libya under the Montreal Convention cannot now be regarded as appropriate for protection by the indication of provisional measures…[494]

358. Several judges confirmed the same line of argumentation in their separate and dissenting opinions.[495] It is noteworthy that the Court, as well as individual judges, referred merely to the enforceability, not the invalidity or suspension, of conflicting treaty obligations.

359. Judge Lauterpacht, in his separate opinion appended to the order of the International Court of Justice in the *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* case, discussed the relationship between Article 103 and *jus cogens*:

> The concept of *jus cogens* operates as a concept superior to both customary international law and treaty. The relief which Article 103 of the Charter may give the Security Council in case of conflict between one of its decisions and an operative treaty obligation cannot—as a matter of simple hierarchy of norms—extend to a conflict between a Security Council resolution and *jus cogens*. Indeed, one only has to state the opposite proposition thus—that a Security Council resolution may even require participation in genocide—for its unacceptability to be apparent.[496]

360. This seems natural. If (as pointed out above) the Charter of the United Nations is not above *jus cogens*, then it also cannot transfer a power to contradict *jus cogens* to bodies that receive their jurisdiction from the Charter.

B. *Jus cogens*

361. The view that some norms are of a higher legal rank than others has found its expression in one way or another in all legal systems.[497] In international law, propositions have consistently been made that there is a category of norms that are so fundamental that derogation from them can never be allowed. No doubt the idea of peremptory norms (*jus cogens*) is older than modern international law itself. Commentators often point to the Roman law distinction between *jus strictum* and *jus dispositivum*,[498] and to the maxim *jus publicum privatorum pactis mutari non potest*.[499] Seventeenth- and eighteenth-century natural lawyers had no doubt whatsoever that certain norms existed timelessly and above the will of States, limiting what could lawfully be agreed by secular rulers or their communities.[500] In addition, the development of the inter-

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[491] See, for example, *Case concerning the Application of the Convention of 1902 governing the Guardianship of Infants (Netherlands v. Sweden)*, Judgment of 28 November 1958, *I.C.J. Reports 1958*, p. 55, at p. 107 (separate opinion of Judge Moreno Quintana); *South West Africa Cases (Ethiopia v. South Africa; Liberia v. South Africa)*, Preliminary Objections, Judgment of 21 December 1962, *I.C.J. Reports 1962*, p. 319, at p. 407 (separate opinion of Judge Jessup); *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, Advisory Opinion, *I.C.J. Reports 1971*, p. 16, at p. 99 (separate opinion of Judge Ammoun); *Application for Revision and Interpretation of the Judgment of 24 February 1982 in the Case concerning the Continental Shelf (Tunisia/Libyan Arab Jamahiriya) (Tunisia v. Libyan Arab Jamahiriya)*, Judgment, *I.C.J. Reports 1985*, p. 192, at pp. 232–233 (separate opinion of Judge Ruda).

[492] See *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America), Jurisdiction and Admissibility*, Judgment, *I.C.J. Reports 1984*, p. 392, at p. 440, para. 107.

[493] *Questions of Interpretation and Application of the 1971 Montreal Convention arising from the Aerial Incident at Lockerbie (Libyan Arab Jamahiriya v. United States of America)*, Preliminary Objections, Judgment, *I.C.J. Reports 1998*, p. 115.

[494] *Questions of Interpretation and Application of the 1971 Montreal Convention arising from the Aerial Incident at Lockerbie (Libyan Arab Jamahiriya v. United Kingdom), Provisional Measures*, Order of 14 April 1992, *I.C.J. Reports 1992*, p. 3, at p. 15, paras. 39–40. See also *ibid.*, pp. 114 *et seq.*, especially pp. 126–127, paras. 42–43.

[495] For example, Judge Shahabuddeen wrote in his separate opinion that "Article 25 of the Charter of the United Nations obliges Libya to comply with the decision set out in [resolution 748 (1992)]. By virtue of Article 103 of the Charter, that obligation prevails over any conflicting treaty obligation which Libya may have … Treaty obligations can be overridden by a decision of the Security Council imposing sanctions … Hence, assuming that Libya has the rights which it claims, *prima facie* they could not be enforced during the life of the resolution" (*Questions of Interpretation and Application of the 1971 Montreal Convention arising from the Aerial Incident at Lockerbie (Libyan Arab Jamahiriya v. United Kingdom)*, Provisional Measures, Order of 14 April 1992, *ibid.*, p. 28 (separate opinion of Judge Shahabuddeen).

[496] *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (see footnote 482 above), p. 440, para. 100 (separate opinion of Judge Lauterpacht).

[497] "It is difficult to imagine any society, whether of individuals or of States, whose law sets no limit whatever to freedom of contract" (McNair (see footnote 58 above), pp. 213–214).

[498] J. A. Frowein, "*Jus cogens*", in R. Bernhardt (ed.), *Encyclopedia of Public International Law*, vol. 3, Amsterdam, Elsevier, 1997, p. 65.

[499] Sinclair (see footnote 63 above), p. 203. See also D. Shelton, "International law and relative normativity", in Evans (ed.) (footnote 481 above), p. 151. Nevertheless, the term *jus cogens* itself is said not to have been used in ancient law. See M. Lachs, "The development and general trends of international law in our time", *Recueil des cours de l'Académie de droit international de La Haye, 1980-IV*, vol. 169, p. 202.

[500] Emmerich de Vattel provided what has become a classic formulation, as follows: "Since … the necessary Law of Nations consists in applying the natural law to States, and since the natural law is not subject to change, being founded on the nature of things and particularly

national law notion of *jus cogens* has undoubtedly been influenced by domestic laws that provide for the nullity of agreements conflicting with *ordre public* or public policy objectives.[501] The background, nature and effects of *jus cogens* were summarized by the International Tribunal for the Former Yugoslavia:

> Because of the importance of the values [the prohibition of torture] protects, this principle has evolved into a peremptory norm or *jus cogens*, that is, a norm that enjoys a higher rank in the international hierarchy than treaty law and even "ordinary" customary rules. The most conspicuous consequence of this higher rank is that the principle at issue cannot be derogated from by States through international treaties or local or special customs or even general customary rules not endowed with the same normative force.[502]

362. *Jus cogens* found its way into positive international law during preparations for the 1969 Vienna Convention. The Commission presented it in articles 50 and 61 of its final draft articles on the law of treaties in 1966.[503] At the United Nations Conference on the Law of Treaties, the concept was moulded into articles 53 and 64 in the following format:

Article 53

> A treaty is void if, at the time of its conclusion, it conflicts with a peremptory norm of general international law. For the purposes of the present Convention, a peremptory norm of general international law is a norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character.

Article 64

> If a new peremptory norm of general international law emerges, any existing treaty which is in conflict with that norm becomes void and terminates.

363. In academic literature, the concept has been the object of a sizeable volume of attention—especially since its incorporation into the 1969 Vienna Convention.[504] Over the years, most of the initial scepticism around the notion itself has tended to vanish. As the Commission has recently remarked, "[t]he concept of peremptory norms of general international law is recognized in international practice, in the jurisprudence of international and national courts and tribunals and in legal doctrine".[505] However, disagreement about its theoretical underpinnings, scope of application and content remains as rife as ever. As Anthony Aust has put it: "The concept *was once controversial**. Now it is more its scope and applicability that is unclear."[506]

364. Two aspects require discussion: the effects of *jus cogens* and its content.

1. The effect of *jus cogens*: invalidity of the conflicting norm

365. Article 53 of the 1969 Vienna Convention provides for the invalidity of treaties which, at the time of their conclusion, are in conflict with a peremptory norm of general international law. Thus, and unlike the mere "priority" provided under article 31 of the Convention, what the concept of *jus cogens* encapsulates is a rule of hierarchy *sensu stricto*, not simply a rule of precedence.[507] Hence, the result of conflicts between treaties and *jus cogens* is that the former are not only non-applicable, but wholly void, giving rise to no legal consequences whatsoever.[508] This entails a further consequence written into article 71, paragraph 1, of the Convention:

> In the case of a treaty which is void under article 53 the parties shall: (*a*) Eliminate as far as possible the consequences of any act performed in reliance on any provision which conflicts with the peremptory norm of general international law; and (*b*) Bring their mutual relations into conformity with the peremptory norm of general international law.

366. This has to be understood in context with article 64 of the Convention, making it clear that the hierarchically higher status of *jus cogens* norms does not have a retroactive character.[509] If the coming into being of a peremp-

upon the nature of man, it follows that the *necessary* Law of Nations is *not subject to change*. Since this law is not subject to change and the obligations which it imposes are necessary and indispensable, Nations can not alter it by agreement, nor individually or mutually release themselves from it. It is by the application of this principle that a distinction can be made between lawful and unlawful treaties or conventions and between customs which are innocent and reasonable and those which are unjust and deserving of condemnation" (de Vattel (see footnote 67 above), vol. I, introduction, p. 4).

[501] Article 6 of the Napoleonic Code provides a good example: "On ne peut déroger, par des conventions particulières, aux lois qui intéressent l'ordre public et les bonnes mœurs" ("Laws concerning public order or social mores are not susceptible to derogation by private agreement").

[502] *Prosecutor v. Anto Furundžija*, Trial Chamber, International Tribunal for the Former Yugoslavia, case No. IT-95-17/1, judgement, 10 December 1998, *Judicial Reports 1998*, p. 467, at p. 569, para. 153 (footnote omitted); ILR, vol. 121 (2002), p. 260.

[503] Article 50: "A treaty is void if it conflicts with a peremptory norm of general international law from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character"; article 61: "If a new peremptory norm of general international law of the kind referred to in article 50 is established, any existing treaty which is in conflict with that norm becomes void and terminates" (*Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, pp. 247, 261).

[504] Nevertheless, the term *jus cogens* was already used, although not extensively, prior to its adoption by the Commission. See generally J. Sztucki, *Jus cogens and the Vienna Convention on the Law of Treaties: A Critical Appraisal,* Vienna, Springer-Verlag, 1974. Cassese views it as being especially a result of developments in the 1960s. See Cassese (footnote 240 above), pp. 199–200.

[505] Para. (2) of the commentary to article 40 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 112.

[506] A. Aust, *Handbook of International Law,* Cambridge, Cambridge University Press, 2005, p. 11. Likewise, *Sosa v. Alvarez-Machain et al.*, United States District Court of Appeals, 3 June 2003, ILR, vol. 127 (2005), p. 705. Michael Byers, for example, has written that "[t]oday, there is widespread acceptance among international lawyers of the concept of *jus cogens*" (Byers, *Custom, Power and the Power of Rules: International Relations and Customary International Law* (see footnote 296 above), p. 184). For a famous sceptical appraisal, see Weil (footnote 181 above), p. 413, who believes that any trend toward recognition of the distinction between peremptory norms and "merely binding norms" contributes to a "dilution" of normativity itself and fosters the development of pathology in the international system.

[507] There is wide agreement on this. See, for example, J. Combacau and S. Sur, *Droit international public*, 6th ed., Paris, Montchrestien, 2004, p. 157.

[508] It is not necessary, however, for this to lead to the invalidation of the whole treaty. Clauses that do not conflict with *jus cogens* and are separable from those that do may remain valid. Cassese (see footnote 240 above), p. 206.

[509] In the words of the Commission itself, there was no question of what was to become article 53 of the 1969 Vienna Convention having retroactive effect. See the draft articles on the law of treaties, *Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, p. 248, para. (6) of the commentary to draft article 50.

tory norm of general international law is subsequent to the conclusion of a treaty, the treaty itself terminates but the rights and obligations based on it only become void inasmuch as they are themselves contrary to the (new) *jus cogens*. This structure is written into article 71, paragraph 2, of the Convention, which states that:

> In the case of a treaty which becomes void and terminates under article 64, the termination of the treaty: (*a*) Releases the parties from any obligation further to perform the treaty; (*b*) Does not affect any right, obligation or legal situation of the parties created through the execution of the treaty prior to its termination, provided that those rights, obligations or situations may thereafter be maintained only to the extent that their maintenance is not in itself in conflict with the new peremptory norm of general international law.

367. Three types of conflict situation may be envisaged. A norm of *jus cogens* might conflict with a regular treaty, with a rule of (general) customary international law or with another norm of *jus cogens*. The first situation is the simplest. Conflict of a treaty with *jus cogens* renders the treaty—or a separable provision thereof—invalid. It makes no difference whether the treaty is bilateral or multilateral. As pointed out above, the Charter of the United Nations constitutes no exception.[510] The same goes for resolutions of international organizations. The same logic applies to a conflict between *jus cogens* and (general) customary law. A conflict between them renders the latter invalid. The question concerning the relationships between conflicting *jus cogens* norms—for example the question of the right to use force in order to realize the right of self-determination—is much more difficult. At this stage, it cannot be presumed that the doctrine of *jus cogens* could itself resolve such conflicts: there is no hierarchy among *jus cogens* norms *inter se*.

368. Already during discussions in the Commission, and also at the United Nations Conference on the Law of Treaties, several delegates expressed their concern that introducing the concept of *jus cogens* into positive law might result in the destabilization of treaty relations. It was feared that States might start using arguments based on *jus cogens* to justify non-performance of treaty obligations.[511] To prevent or minimize such occasions, a mechanism was written into the 1969 Vienna Convention, according to which parties to a dispute concerning the validity of a treaty need to seek a solution through the peaceful means listed in the Charter of the United Nations; if they fail to reach one, then

> [a]ny one of the parties to a dispute concerning the application or the interpretation of article 53 or 64 may, by a written application, submit it to the International Court of Justice for a decision unless the parties by common consent agree to submit the dispute to arbitration.[512]

369. No cases have been brought to the International Court of Justice under this article to date.

370. The most significant use of *jus cogens* as a conflict norm has been by the British House of Lords in the *Pinochet* case.[513] Here, as is well known, the question arose of whether immunity of a former Head of State could be upheld against an accusation of his having committed torture while in office. Referring to relevant passages in the *Furundžija* case,[514] the Lords held that "[t]he *jus cogens* nature of the international crime of torture justifies [S]tates in taking universal jurisdiction over torture wherever committed".[515] As the condition of "double criminality" was fulfilled, Pinochet could not plead immunity against a request for extradition to Spain. To use the words of Lord Millett:

> International law cannot be supposed to have established a crime having the character of a *jus cogens* and at the same time to have provided an immunity which is coextensive with the obligation it seeks to impose.[516]

371. The Pinochet litigation turned out to have historic consequences, not so much for Senator Pinochet personally, but rather in the sense that, for the first time, a local domestic court denied immunity to a former Head of State on the grounds that there cannot be any immunity against prosecution for breach of *jus cogens*.

372. That it is the point of *jus cogens* to invalidate inferior norms does not mean that *jus cogens* would provide automatic access to justice, irrespective of procedural obstacles, to punish individuals or, for example, concerning relief in civil matters. In *Al-Adsani*, the European Court of Human Rights was called upon to adjudge whether the United Kingdom had violated the European Convention on Human Rights, as British courts had upheld the immunity of the State of Kuwait in a civil matter that concerned liability that it was alleged to owe to a person (Al-Adsani) who had been tortured by Kuwaiti agents.[517] The court held the prohibition of torture to be part of *jus cogens* but did not find a violation of articles 1 and 3 of the European Convention on Human Rights in the way United Kingdom courts had been applying the State Immunity Act 1978. The court stated:

> While the Court accepts … that the prohibition of torture has achieved the status of a peremptory norm in international law, it observes that the present case concerns not, as in *Furundžija* and *Pinochet*, the criminal liability of an individual for alleged acts of torture, but the immunity of a State in a civil suit for damages in respect of acts of torture within the territory of that State. Notwithstanding the special character of the prohibition of torture in international law, the Court is unable to discern in the international instruments, judicial authorities or other materials before it any firm basis for concluding that, as a matter of international law, a State no longer enjoys immunity from civil suit in the courts of another State where acts of torture are alleged.[518]

373. Thus, the court, while noting the growing recognition of the prohibition of torture as part of *jus cogens*,

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[510] Since the Charter was adopted years before the entry into force of the 1969 Vienna Convention, the relationship between the Charter and *jus cogens* cannot be dealt with on the basis of the latter, but instead under the framework of customary international law.

[511] For a famous sceptical appraisal, see Weil (footnote 181 above), p. 413, arguing that any distinction between peremptory norms and "ordinary" norms contributes to a "dilution" of normativity itself and fosters the erosion of the international system.

[512] See articles 65, paragraph 3, and 66 (*a*) of the 1969 Vienna Convention.

[513] *Regina v. Bow Street Metropolitan Stipendiary Magistrate, ex parte Pinochet Ugarte (No. 3)*, House of Lords, 24 March 1999, [1999] UKHL 17, [2000] 1 AC 147, reproduced in ILR, vol. 119, p. 135.

[514] *Prosecutor v. Anto Furundžija* (see footnote 502 above), *Judicial Reports 1998*, p. 569, para. 153; ILR, vol. 121 (2002), p. 260.

[515] *Regina v. Bow Street Metropolitan Stipendiary Magistrate, ex parte Pinochet Ugarte (No. 3)* (see footnote 513 above), ILR, vol. 119, p. 149.

[516] *Ibid.*, p. 232.

[517] *Al-Adsani v. the United Kingdom* (see footnote 219 above), p. 79.

[518] *Ibid.*, p. 101, para. 61.

did not find it established that there was yet acceptance in international law of the proposition that States are not entitled to immunity in respect of civil claims for damages for alleged torture committed outside the forum State. By finding as it did, the court did not afford a norm of *jus cogens* an effect which would override the rights of States under customary international law.[519]

2. The content of *jus cogens*

374. In the final text of its draft articles on the law of treaties, the Commission deliberately dispensed with listing concrete examples of *jus cogens* norms.[520] It did so because, as it put the matter, "there is no simple criterion by which to identify a general rule of international law as having the character of *jus cogens*".[521] The adoption of the 1969 Vienna Convention was then predictably followed by an extensive debate about precisely this matter. There are today a number of pronouncements from various judicial or diplomatic organs that give an idea of what might count as *jus cogens* norms. In its commentary to the draft articles on responsibility of States for internationally wrongful acts of 2001, the Commission gave as examples of *jus cogens* the prohibitions on aggression, slavery and the slave trade, genocide, racial discrimination and apartheid, and torture (as defined in the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, 1984); the basic rules of international humanitarian law applicable in armed conflict; and the right to self-determination.[522] In the *Furundžija* case, the International Tribunal for the Former Yugoslavia defined torture as both a peremptory norm and an obligation *erga omnes*.[523] Overall, the most frequently cited candidates for the status of *jus cogens* include: (*a*) the prohibition of aggressive use of force; (*b*) the right to self-defence; (*c*) the prohibition of genocide; (*d*) the prohibition of torture; (*e*) crimes against humanity; (*f*) the prohibition of slavery and the slave trade; (*g*) the prohibition of piracy; (*h*) the prohibition of racial discrimination and *apartheid*; and (*i*) the prohibition of hostilities directed at civilian populations ("basic rules of international humanitarian law").[524]

375. The problem of how to identify *jus cogens* is not easy to resolve *in abstracto*. As most commentators point out, it is not only that there is no single authoritative list of *jus cogens* norms; there is also no agreement about the criteria for inclusion on that list. The starting point must be the formulation of article 53 itself, identifying *jus cogens* by reference to what is "accepted and recognized by the international community of States as a whole". Although that formulation itself is not free from controversy (especially references to a community of "*States*" and to the meaning of the requirement "*as a whole*"),[525] there is also a disturbing circularity about it. If the point of *jus cogens* is to limit what may be lawfully agreed by States, can its content simultaneously be made dependent on what is agreed between States?[526] The historical background of *jus cogens* lies in an anti-voluntarist, often religiously inclined natural law—the presumption of the

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[519] In his dissenting opinion in the *Al-Adsani* case, which began with the words "What a pity!", Judge Ferrari Bravo expressed deep disappointment in the outcome of the case: "The Court … had a golden opportunity to issue a clear and forceful condemnation of all acts of torture. To do so, it need only have upheld the thrust of the House of Lords' judgment in *Regina v. Bow Street Metropolitan Stipendiary and Others, ex parte Pinochet Ugarte (No. 3)* … to the effect that the prohibition of torture is now *jus cogens*, so that torture is a crime under international law. It follows that every State has a duty to *contribute* to the punishment of torture and cannot hide behind formalist arguments to avoid having to give judgment. … But it is precisely one of those old formalist arguments which the Court endorsed when it said … that it was unable to discern any rules of international law requiring it not to apply the rule of immunity from civil suit where acts of torture were alleged. … There will be other such cases, but the Court has unfortunately missed a very good opportunity to deliver a courageous judgment" (*ibid.*, p. 114, dissenting opinion of Judge Ferrari Bravo).

[520] *Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, p. 248, para. (3) of the commentary to draft article 50.

[521] *Ibid.*, pp. 247–248, para. (2). Lord McNair has elegantly expressed the same idea by writing that "it is easier to illustrate these rules [*jus cogens*] than to define them" (see McNair (footnote 58 above), p. 215). Likewise, for example, Aust, *Handbook of International Law* (see footnote 506 above), p. 11, and Shelton (see footnote 499 above), p. 151.

[522] Paras. (4)–(6) of the commentary to article 40 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 112–113.

[523] *Prosecutor v. Anto Furundžija* (see footnote 502 above), *Judicial Reports 1998*, pp. 567–573, paras. 151–157; ILR, vol. 121 (2002), pp. 260–262.

[524] Brownlie lists, as the least controversial examples of the class, the prohibition of the use of force, the law of genocide, the principle of racial non-discrimination, crimes against humanity, and the rules prohibiting trade in slaves and piracy (Brownlie, *Principles of Public International Law* (see footnote 166 above)); Aust sees the prohibitions on the use of force (as laid down in the Charter of the United Nations) and on genocide, slavery and torture as perhaps the only generally accepted examples (Aust, *Handbook of International Law* (see footnote 506 above), p. 11); Rosalyn Higgins mentions as examples the prohibitions on genocide, torture and the killing of prisoners of war (R. Higgins, *Problems and Process: International Law and How We Use It*, Oxford, Oxford University Press, 1994, pp. 21–22). The examples of obligations articulated by the International Court of Justice in the *Barcelona Traction* case—prohibition of aggression, genocide, breaches of rules concerning the basic rights of the human person, including protection from slavery and racial discrimination—are also often cited as examples of *jus cogens* (*Barcelona Traction, Light and Power Company, Limited*, Judgment, *I.C.J. Reports 1970*, p. 3, at p. 32, para. 34). For rules described as "fundamental" in the practice of the International Court of Justice, see V. Gowlland-Debbas, "Judicial insights into fundamental values and interests of the international community", in A. S. Muller and others (eds.), *The International Court of Justice: Its Future Role after Fifty Years,* The Hague, Kluwer Law International, 1997, p. 327, at pp. 335–342. For lists, see also J. Petman, "Panglossian views to the new world order: review of Cassese, *International Law* (2001)", *Finnish Yearbook of International Law*, vol. 13 (2002), pp. 337–338; see also Daillier and Pellet, *Droit international public* (footnote 74 above), pp. 206–207. Some commentators have proposed that *jus cogens* also encompasses the freedom of the high seas (see Frowein, "*Jus cogens*" (footnote 498 above), p. 67), yet the view of the Commission seems always to have been different. The Commission has stated continuously that it is not universal acceptance that elevates a norm to the status of *jus cogens*, but its content. In the words of the Commission, "[i]t is not the form of a general rule of international law but the particular nature of the subject-matter with which it deals that may, in the opinion of the Commission, give it the character of *jus cogens*" (*Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, p. 248, para. (2) of the commentary to draft article 50). Following the same line, the Commission has added only recently that obligations under peremptory norms of international law "arise from those substantive rules of conduct that prohibit what has come to be seen as intolerable because of the threat it presents to the survival of States and their peoples and the most basic human values" (*Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 112, para. (3) of the commentary to article 40 of the draft articles on responsibility of States for internationally wrongful acts).

[525] See, for example, Cassese (footnote 240 above), p. 201 ("most important and representative States"), and the discussion in Combacau and Sur, *Droit international public* (footnote 507 above), pp. 158–160.

[526] See Koskenniemi, *From Apology to Utopia…* (footnote 79 above), pp. 323–325.

existence of "absolute" norms for human conduct. While most people (and States) still hold it important—indeed very important—that such norms exist, the vocabularies of present-day diplomacy and law seem unable to produce a plausible justification for them. Any "criterion" that one might wish to invoke in support of the status of any particular norm as *jus cogens* would seem to infect that putative norm with all the uncertainties and vulnerabilities that relate to that criterion.

376. Instead of trying to determine the content of *jus cogens* through abstract definitions, it is better to follow the path chosen by the Commission in 1966 as it "considered the right course to be to provide in general terms that a treaty is void if it conflicts with a rule of *jus cogens* and to leave the full content of this rule to be worked out in State practice and in the jurisprudence of international tribunals".[527] That still seems the right way to proceed.

3. Case law

377. The extent of case law on *jus cogens* is vast. Many courts and tribunals, both international and domestic, have used arguments based on *jus cogens* to substantiate their decisions and judgments.[528] Yet the number of cases in which *jus cogens* has appeared from the viewpoint of norm conflict is considerably more limited. As noted by Antonio Cassese:

> no dispute has arisen between States as to the *jus cogens* nature of a specific rule. Nor have one or more States insisted on the peremptory nature of a rule in a dispute with other States, accompanied by either acquiescence by other States or contestation by them. Nor has any international tribunal, let alone the [International Court of Justice], settled any dispute revolving around the question of whether or not a specific rule must be regarded as belonging to the corpus of norms under discussion.[529]

378. The International Court of Justice has been reluctant to refer to *jus cogens* in its decisions. An explicit mention of the term can be found only in very few cases. An example may be given by the decision of the Court most often referred to in relation to *jus cogens*, in the *Military and Paramilitary Activities in and against Nicaragua* case in 1986.[530] Nevertheless, more has perhaps been read into this decision than is warranted: the Court only mentions the words *jus cogens* by quoting (although apparently with approval) the Commission and the representatives of both parties to the dispute—it never picked up the vocabulary as part of its own language.[531]

379. Yet the fact that the Court has repeatedly referred to general and fundamental principles that lie beyond contractual treaty relations allows for the assumption that the Court has, in substance, affirmed the concept. In its very first case, it pointed out that the obligations of States do not necessarily have to have a conventional nature, but instead may also be founded on certain general and well-recognized principles, among which are "elementary considerations of humanity".[532] Just a year later the Court gave one of its most famous advisory opinions, in which it stated that "the principles underlying the Convention [on Genocide] are principles which are recognized by civilized nations as binding on States, even without any conventional obligation".[533] In the same vein, an advisory opinion of 1996 contained a reference to "intransgressible principles of international customary law".[534] These lines, and also the reasoning in the *Barcelona Traction* case, show that the Court has, from the very beginning, deemed it necessary to highlight the existence of particularly important norms in international law, although it has been less than clear about their status or operation.[535]

C. Obligations *erga omnes*

380. Obligations *erga omnes* are different from Article 103 of the Charter of the United Nations and *jus cogens*. Whereas the latter are distinguished by their normative power—their ability to override a conflicting

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[527] Draft articles on the law of treaties, *Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, p. 248, para. (3) of the commentary to article 50.

[528] For an overview of references to fundamental norms in the judicial pronouncements of the International Court of Justice and its predecessor, see Gowland-Debbas, "Judicial insights into fundamental values and interests…"(footnote 524 above), pp. 332–342. For other bodies, see, for example, *Prosecutor v. Kupreškić and others*, Trial Chamber, International Tribunal for the Former Yugoslavia, case No. IT-95-16-T, Judgment of 14 January 2000, *Judicial Reports 2000*, vol. II, para. 520, which states that "most norms of international humanitarian law, in particular those prohibiting war crimes, crimes against humanity and genocide, are also peremptory norms of international law or *jus cogens*, i.e. of a non-derogable and overriding character". See the case law section for further examples of occasions where the concept has been endorsed by various judicial authorities.

[529] Cassese (see footnote 240 above), p. 202.

[530] *Military and Paramilitary Activities in and against Nicaragua*, Merits, Judgment of 27 June 1986 (see footnote 51 above), pp. 100–101, para. 190.

[531] The only format in which the term *jus cogens* has really been put to use by the International Court of Justice comprises separate and dissenting opinions of individual judges of the Court. In fact, back in 1934, Judge Schücking of the Permanent Court of International Justice referred in his separate opinion to the possibility of creating *jus cogens* in the form of agreements between States. See the *Oscar Chinn* case (footnote 138 above), p. 149 (separate opinion of Judge Schücking). Throughout the following years, numerous references have been made to peremptory norms in this format. See, for example, *Case concerning the Application of the Convention of 1902 governing the Guardianship of Infants* (footnote 491 above), pp. 106 *et seq.* (separate opinion of Judge Moreno Quintana); *North Sea Continental Shelf* (footnote 95 above), pp. 97, 248 (separate opinion of Judges Padilla Nervo and Sörensen), and p. 182 (dissenting opinion of Judge Tanaka); *Barcelona Traction, Light and Power Company, Limited* (footnote 524 above), p. 304 (separate opinion of Judge Ammoun); *Military and Paramilitary Activities in and against Nicaragua*, Merits, Judgment of 27 June 1986 (footnote 51 above), p. 153 (separate opinion of President Nagendra Singh), and pp. 199 *et seq.* (separate opinion of Judge Sette-Camara); *Application of the Convention on the Prevention and Punishment of the Crime of Genocide* (footnote 482 above), p. 440 (separate opinion of Judge Lauterpacht); *Legality of Use of Force (Yugoslavia v. United States of America)*, Provisional Measures, Order of 2 June 1999, *I.C.J. Reports 1999*, p. 916, at pp. 965–973, paras. 10–17 (dissenting opinion of judge *ad hoc* Kreća); *Arrest Warrant of 11 April 2000 (Democratic Republic of the Congo v. Belgium)*, Judgment, *I.C.J. Reports 2002*, p. 3, at p. 96, para. 3 (dissenting opinion of Judge Al-Khasawneh); *Oil Platforms (Islamic Republic of Iran v. United States of America)* (footnote 128 above), p. 279, para. 23 (separate opinion of Judge Buergenthal).

[532] *Corfu Channel* (see footnote 449 above), p. 22.

[533] *Reservations to the Convention on Genocide* (see footnote 326 above), p. 23.

[534] *Legality of the Threat or Use of Nuclear Weapons* (see footnote 122 above), p. 257, para. 79. The same was confirmed by the Court in its latest advisory opinion to date, *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Advisory Opinion, *I.C.J. Reports 2004*, p. 136.

[535] *Barcelona Traction, Light and Power Company, Limited* (see footnote 524 above), p. 32.

norm—obligations *erga omnes* designate the *scope of application* of the relevant law and the procedural consequences that follow from this. The duty to comply with a norm that creates obligations *erga omnes* is owed to the "international community as a whole", and all States—irrespective of their particular interest in the matter—are entitled to invoke State responsibility in case of breach. The *erga omnes* nature of an obligation, however, indicates no clear superiority of that obligation over other obligations. Although in practice norms recognized as having an *erga omnes* validity set up undoubtedly important obligations, this importance does not translate into a hierarchical superiority similar to that of Article 103 and *jus cogens*.

381. It may be true that "[t]he question as to the legal significance of the category of State obligations *erga omnes* has been hotly contested among scholars and lawyers and remains stubbornly unsettled within international legal literature and practice".[536] Yet although this may apply to particular understandings (and listings) of *erga omnes* obligations, the concept itself—the idea of the *erga omnes* applicability of certain rules of international law—is deeply rooted in international practice.

1. From bilateral obligations to obligations *erga omnes* owed to "the international community as a whole"

382. The bulk of international law emerges from contractual relations between individual States and remains in this sense "bilateralist".[537] Obligations are owed by States to each other, and each State is only individually entitled to invoke a breach as a basis for State responsibility. International law's special nature is well captured by Professor Allott, who has described it as "the minimal law necessary to enable State-societies to act as closed systems internally and to act as territory-owners in relation to each other".[538] Or, in the words of Simma:

> [T]raditional international law was left entirely in the hands of sovereign States, predicated on their bilateral legal relations, on the intrinsically bilateral character of legal accountability … As to the substance built upon such a bilateralist grounding, international law had, in the course of centuries, developed into a system of rules delimiting the spheres of sovereignty of States in space and time, as well as with regard to persons and certain jurisdictional matters respectively. In essence, these rules obliged States to abstain from interfering in the areas so demarcated. In addition, international law provided a reciprocity-based framework for … legal transactions in the form of treaties…[539]

383. The bilateralism of international law means that international law obliges States reciprocally in their relations *inter se* and not towards each other as members of some more or less general idea of an international public realm. The bilateralist mode of operation is particularly important in the law of State responsibility, which may be characterized in terms of "private justice" or an "every-man-for-himself doctrine":

> For a [S]tate to enjoy a right implies its possession of legal standing to claim performance of the corresponding obligation and, in default, to bring to book the person or persons owing that obligation. … In sum, no international obligations *erga omnes*, traditionally, exist: it is up to each [S]tate to protect its own rights; it is up to none to champion the rights of others.[540]

384. This view was expressed by the International Court of Justice in its advisory opinion concerning *Reparation for injuries suffered in the service of the United Nations*, when it held that "only the party to whom an international obligation is due can bring a claim in respect of its breach".[541]

385. Contemporary international law has, however, moved well beyond bilateralism. In the Commission's debates on what would become the 1969 Vienna Convention, the Special Rapporteurs were already making a distinction between treaties creating obligations that were owed by States to each other in a network of reciprocal relationships and treaties creating what Fitzmaurice called "a more absolute type of obligation"—that is, an obligation of an "integral" or "interdependent" character. As examples of these categories he gave disarmament and humanitarian law conventions. The obligations in such conventions could not be meaningfully reduced into reciprocal State-to-State relationships.[542] In that context, the interest of the distinction lay in the manner in which conflicts between treaties were to be dealt with, the "more absolute" type of obligation being less easily derogated from by "modification" or *lex posterior*.

386. The case most frequently mentioned in the early debates concerned the prohibition of genocide. According to the reasoning of the International Court of Justice in the *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide* case, classical treaties were about individual advantages and disadvantages to States, or about the maintenance of a contractual balance.[543] Yet under conventions such as the Convention on the Prevention and Punishment of the Crime of Genocide, States were not pursuing their national, individual interests. Instead, they had a "common interest, namely, the accomplishment of those high purposes which are the *raison d'être* of the convention" and "[c]onsequently, in a convention of this type one cannot speak of individual advantages or disadvantages to States, or of the

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[536] I.D. Seiderman, *Hierarchy in International Law: The Human Rights Dimension,* Antwerp, Intersentia, 2001, p. 123.

[537] See especially B. Simma, "From bilateralism to community interest in international law", *Recueil des cours de l'Académie de droit international de La Haye, 1994-VI*, vol. 250, pp. 230 *et seq.* This notion was first used by Special Rapporteur Willem Riphagen in his third report on the State responsibility (A/CN.4/354 and Add.1–2) (see footnote 185 above), p. 36, para. 91. As pointed out by Simma, the term "bilateralist" grasps the essence of international law more precisely and is less prone to misunderstandings than the adjectives "relative" or "relational" (Simma, "From bilateralism to community interest in international law", p. 230*).*

[538] P. Allott, *Eunomia: New Order for a New World*, Oxford, Oxford University Press, 1990, p. 324.

[539] Simma, "From bilateralism to community interest in international law" (see footnote 537 above), p. 229.

[540] Weil (see footnote 181 above), p. 431. Likewise, Alland (see footnote 251 above). For another argument, suggesting that the concept of obligations *erga omnes* is not viable as a matter of law, see J. Klabbers, "The scope of international law: *erga omnes* obligations and the turn to morality", in M. Tupamäki (ed.), *Liber Amicorum Bengt Broms: Celebrating His 70th Birthday 16 October 1999,* Helsinki, Finnish Branch of the International Law Association, 1999, p. 177.

[541] *Reparation for injuries suffered in the service of the United Nations*, Advisory Opinion, *I.C.J. Reports 1949*, p. 174, at pp. 181–182.

[542] Third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur (A/CN.4/115) (see footnote 139 above), p. 44, para. 91.

[543] *Reservations to the Convention on Genocide* (see footnote 326 above), p. 23.

maintenance of a perfect contractual balance between rights and duties".[544] Since that case, it has become common for scholars—but also tribunals, both international and domestic—to refer to "certain overriding universal values"[545] and shared interests or preferences upon which a distinction is made between contract-type norms and those of a more public law character.

387. The *locus classicus* here is, of course, the statement by the Court in the *Barcelona Traction* case, which may have received inspiration from the debates under way since the adoption of the 1969 Vienna Convention concerning the nature and role of "fundamental norms" that could not be reduced to the regulation of bilateral State-to-State relations.[546] Here the term "*erga omnes*" (which is a Latin equivalent for "towards everyone/all") received major public attention for the first time.[547] As is well known, the Court held that Belgium did not possess legal standing to act against Spain on behalf of Belgian shareholders in a Canadian company. In a famous *obiter dictum*, the Court stated the following:

> an essential distinction should be drawn between the obligations of a State towards the international community as a whole, and those arising *vis-à-vis* another State in the field of diplomatic protection. By their very nature the former are the concern of all States. In view of the importance of the rights involved, all States can be held to have a legal interest in their protection; they are obligations *erga omnes*.
>
> Such obligations derive, for example, in contemporary international law, from the outlawing of acts of aggression, and of genocide, as also from the principles and rules concerning the basic rights of the human person, including protection from slavery and racial discrimination. Some of the corresponding rights of protection have entered into the body of general international law … ; others are conferred by international instruments of a universal or quasi-universal character.[548]

388. The significance of these passages lies foremost in outlining that there are indeed different types of obligations in international law. On the one hand there are obligations of a traditional type, which exist towards another particular State or States on a bilateralist basis; then there are obligations that are the concern of all States and in the protection of which all States have a legal interest.

389. Although the examples given by the International Court of Justice of obligations *erga omnes* may also have the nature of *jus cogens*, the Court did not seek to emphasize their non-derogability. Instead, it wanted to point to the fact that there were some rules that gave rise to a generality of standing to make claims in the event of a violation.[549] *Erga omnes* norms were not necessarily distinguished by the importance of their substance. They were norms with certain procedural features—specifically the feature that a breach of them can be invoked by any State and not just by individual beneficiaries. These were obligations that were about secondary, not primary rules.[550] The Commission itself has confirmed the doctrine of obligations *erga omnes*. Even though the idea of some violations constituting such grave offences against the international public order as a whole as to be labelled "crimes" was in the end omitted from the Commission's draft articles on responsibility of States for internationally wrongful acts of 2001, draft article 48 of the final text was, as part of the resulting compromise, drafted so as to recognize the possibility of an invocation of responsibility by a State other than an injured State:

> 1. Any State other than an injured State is entitled to invoke the responsibility of another … if:
>
> (*a*) the obligation breached is owed to a group of States including that State, and is established for the protection of a collective interest of the group; or
>
> (*b*) the obligation breached is owed to the international community as a whole.[551]

390. In its commentary, the Commission makes it clear that this provision is intended to deal with obligations of the kind referred to in the *Barcelona Traction* case. And, although the language is different, the provision also takes up the cases that Fitzmaurice dealt with under the vocabulary of treaties establishing "integral" and "interdependent" obligations. Paragraph 1 (*a*), in particular, deals with what the commentary addresses as "obligations *erga omnes partes*"—that is to say, obligations arising out of a treaty and designed to protect the "collective interests" of the treaty parties.[552] Paragraph 1 (*b*) deals with obligations *erga omnes* proper, that is, obligations in the general law whose implementation is the concern of "the international community as a whole".

2. To whom are obligations *erga omnes* owed?

391. Most (though not all) *erga omnes* obligations have emerged in the field of human rights and humanitarian law. In these fields, the law does not create reciprocal

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[544] *Ibid.*

[545] Gowlland-Debbas, "Judicial insights into fundamental values and interests…" (see footnote 524 above), p. 328. See further C. J. Tams, *Enforcing Obligations Erga omnes in International Law,* Cambridge, Cambridge University Press, 2005, pp. 2–3 and *passim*.

[546] J. A. Frowein, "Obligations *erga omnes*", in Bernhardt (ed.), *Encyclopedia of Public International Law*, vol. 3 (see footnote 498 above), p. 757.

[547] *Barcelona Traction, Light and Power Company, Limited* (see footnote 524 above), p. 32, para. 33. For support for the concept of obligations *erga omnes*, see O. Schachter, *International Law in Theory and Practice,* Dordrecht, Martinus Nijhoff, 1991, pp. 343–345; C. Annacker, "The legal régime of *erga omnes* obligations in international law", *Österreichische Zeitschrift für öffentliches Recht und Völkerrecht*, vol. 46, No. 2 (1994), p. 131. For criticism, see Weil (footnote 181 above), p. 413.

[548] *Barcelona Traction, Light and Power Company, Limited* (see footnote 524 above), p. 32, paras. 33–34.

[549] See M. Byers, "Conceptualising the relationship between *jus cogens* and *erga omnes* rules", *Nordic Journal of International Law*, vol. 66 (1997), p. 211, at p. 230.

[550] See also the fourth report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur (A/CN.4/444 and Add.1–3) (footnote 203 above), p. 34, para. 92: "the concept of *erga omnes* obligations is not characterized by the importance of the interest protected by the norm (as is typical of *jus cogens*) but rather by the 'legal indivisibility' of the content of the obligation, namely by the fact that the rule in question provides for obligations which bind simultaneously each and every State concerned with respect to all others. This legal structure is typical not only of peremptory norms, but also of other norms of general international law and of a number of multilateral treaty rules (*erga omnes partes* obligations)."

[551] Art. 48 of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 126.

[552] *Ibid.*, pp.126–128, commentary to draft article 48. The examples given by the Commission concern treaties that have to do with the environment, or the security of a region, or a regional system of human rights protection.

obligations between States in the bilateralist manner. An obligation to respect the right to freedom of speech in a State's territory, for example, is not directed towards any particular States or the citizens of particular States. Rather, under such a norm a State assumes a responsibility in relation to all persons under its jurisdiction. There is no *quid pro quo* in such relations. A State is obliged to respect that right irrespective of how other States may have behaved.[553]

392. This raises the question of who the beneficiaries of *erga omnes* obligations are and whether one's status as an immediate beneficiary has any bearing on the capacity to react to violations. It may, from an academic perspective, be quite correct to state that *erga omnes* obligations "are grounded not in an exchange of rights and duties but in an adherence to a normative system".[554] Yet it is far from clear what this means in terms of the procedural rights triggered by any actual violation.

393. If a State is responsible for torturing its own citizens, no single State suffers any direct harm. Apart from the individual or individuals directly concerned, any harm attributed to anyone else is purely notional, that is, constructed on the basis of the assumption that such action violates some values or interests of "all", or in the vocabulary of the *Barcelona Traction* case, the "international community as a whole". Although the State committing torture has breached its obligations, under bilateralism, there would be no injured State and thus no State in possession of a claim right.[555] But of course, the Commission has now accepted that there may be situations where non-injured States may also be entitled to invoke breaches and that those are precisely the kinds of situations where the violations concern the "international community as a whole" and where all States have a legal interest.[556] The case of *erga omnes partes* dealt with in draft article 48, paragraph 1 (*a*), covers the situation where a collective interest of treaty parties has been violated and where, consequently, it is reasonable to entitle all the parties to invoke the breach. Draft article 48, paragraph 1 (*b*), deals with general *erga omnes* obligations that establish a right for all States—that is to say, in their capacity as members of the "international community"—to invoke the breach.[557]

394. Again, a good summary can be found in the *Furundžija* judgment of the International Tribunal for the Former Yugoslavia. Having stated that the prohibition of torture was a *jus cogens* norm, the Tribunal also defined it as establishing an *erga omnes* obligation, as follows:

> Furthermore, the prohibition of torture imposes upon States obligations *erga omnes*, that is, obligations owed towards all the other members of the international community, each of which then has a correlative right. In addition, the violation of such an obligation simultaneously constitutes a breach of the correlative right of all members of the international community and gives rise to a claim for compliance accruing to each and every member, which then has the right to insist on fulfilment of the obligation or in any case to call for the breach to be discontinued.[558]

395. The distinction between "bilateral" and *erga omnes* obligations seems analogous to the domestic distinction between contracts and public law obligations. In the latter, the relationship is between the legal subject and the public power. Even if a breach of such an obligation may violate an individual interest, the capacity to react (as in most criminal law) lies in the hands of the public power.

396. This does not, however, mean that States could react only through a collective process. Indeed, if that were the case, the absence of general collective reaction procedures—apart from those under Chapter VII of the Charter of the United Nations—would render the provision on *erga omnes* practically meaningless. As pointed out by Gaja in his report to the Institute of International Law, a collective reaction involving all States "is in practice impossible". Therefore it must be concluded that an obligation owed to the "international community as a whole" is also owed to each State individually and without any specific interest on that State's part, and that each of them has the capacity to react in case of breach. Whether other subjects—individuals, groups of individuals or organizations—might also be entitled to react depends on the content of the relevant norm and whether suitable avenues for such reaction are present.[559]

397. It has also been suggested that the fact that an obligation is owed *erga omnes* is relevant to determining the consequences of its breach. In particular, it may involve the obligation of non-recognition. Considering the legality of the security barrier built by Israel partly on the

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[553] As noted by Simma, human rights treaties are among those agreements in regard to which "obligations do not run between the States parties at all but rather oblige the contracting States to adopt a certain 'parallel' conduct within their jurisdiction which does not manifest itself as any tangible exchange or interaction *between* the parties" (B. Simma, "Bilateralism and community interest in the law of State responsibility", in Y. Dinstein (ed.), *International Law at a Time of Perplexity: Essays in Honour of Shabtai Rosenne,* Dordrecht, Martinus Nijhoff, 1988, p. 821, at p. 823).

[554] See R. Provost, "Reciprocity in human rights and humanitarian law", *British Year Book of International Law 1994*, vol. 65, p. 383, at p. 386.

[555] Seiderman goes so far as to assert that "it is inappropriate to divide human rights norms into those which entail obligations *erga omnes* and those which do not" (Seiderman (see footnote 536 above), p. 124). For an alternative view, see Byers, "Conceptualising the relationship between *jus cogens* and *erga omnes* rules" (footnote 549 above), p. 232. Byers sees obligations *erga omnes* as still being within the bilateralist paradigm, suggesting that "an *erga omnes* rule might be considered to involve a series of identical bilateral relationships between every possible pair of States", plus having the characteristic that every State has the right to present a claim, whoever suffers the direct loss from a breach of such obligations. Inspiration for such treatment of the doctrine might be based on what the International Court of Justice stated in 1974 in the *Nuclear Tests* case. In its decision, the Court held that "[t]he unilateral statements of the French authorities were made outside the Court, publicly and *erga omnes* … The objects of these statements are clear and they were addressed to the international community as a whole, and the Court holds that they constitute an undertaking possessing legal effect" (*Nuclear Tests (Australia v. France)*, Judgment, *I.C.J. Reports 1974*, p. 253, at p. 269, paras. 50–51). According to the argumentation in this early opinion, obligations *erga omnes* would really be no more than obligations a State has taken in relation to all the States of the international community.

[556] Art. 42 (*b*) of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook … 2001*, vol. II (Part Two) and corrigendum, p. 117.

[557] *Ibid.*, pp. 126–128, commentary to draft article 48.

[558] *Prosecutor v. Anto Furundžija* (see footnote 502 above), *Judicial Reports 1998*, p. 567, para. 151; ILR, vol. 121 (2002), p. 260.

[559] G. Gaja, "Obligations and rights *erga omnes* in international law", *Annuaire de l'Institut de droit international*, vol. 71-I (Session of Krakow, 2005—First Part), p. 117, at p. 126.

occupied territory of Palestine, the International Court of Justice stated the following:

> The obligations *erga omnes* violated by Israel are the obligation to respect the right of the Palestinian people to self-determination, and certain of its obligations under international humanitarian law.
>
> …
>
> Given the character and the importance of the rights and obligations involved, the Court is of the view that all States are under an obligation not to recognize the illegal situation resulting from the construction of the wall…[560]

398. The Court specified this by holding:

> They are also under an obligation not to render aid or assistance in maintaining the situation created by such construction. It is also for all States, while respecting the United Nations Charter and international law, to see to it that any impediment, resulting from the construction of the wall, to the exercise by the Palestinian people of its right to self-determination is brought to an end. In addition, all the States parties to the Geneva Convention relative to the Protection of Civilian Persons in Time of War of 12 August 1949 are under an obligation, while respecting the United Nations Charter and international law, to ensure compliance by Israel with international humanitarian law as embodied in that Convention.[561]

3. Obligations *erga omnes partes*

399. The judgment of the International Court of Justice in the *Barcelona Traction* case contains a statement to the effect that "the instruments which embody human rights do not confer on States the capacity to protect the victims of infringements of such rights irrespective of their nationality".[562] These lines may be taken to mean that obligations *erga omnes* cannot be based on treaty law. This, however, cannot have been the Court's meaning. A better view seems to be that the Court wished to say that specific agreements may channel legal standing into appropriate procedures. In other words, the statement would not relate to the sources of obligations *erga omnes*, but to the technical particularities of human rights treaties. As Ian Seiderman has stated, "in order to institute an *actio popularis*, a State or other subject of international law would need both standing and a forum. *Erga omnes* addresses itself only to the former requirement."[563]

400. Yet not too much should be made of the distinction (standing and jurisdiction). In the case of State responsibility—the principal field of *erga omnes* obligations—the absence of jurisdiction does not extinguish the claim. In the human rights field, for instance, the general law of State responsibility becomes fully available for actors representing the "international community as a whole", even where an "*actio popularis*" might remain beyond the possibilities offered by the particular forum.[564]

401. This logic was long ago expressed in regard to the European Convention on Human Rights. In the *Pfunders* case, in 1961,[565] the Austrian Government alleged that criminal proceedings in Italian courts had been carried out in conflict with article 6 of the Convention. The Italian Government objected that the treaty bodies lacked competence *ratione temporis* to entertain the case, as Austria had not ratified the Convention at the time of the disputed events and was thus not empowered to bring the claim. However, the European Commission of Human Rights rejected this argument with the famous statement that

> the purpose of the High Contracting Parties in concluding the Convention was not to concede to each other reciprocal rights and obligations in pursuance of their individual national interests but to realise the aims and ideals of the Council of Europe, as expressed in its Statute, and to establish a common public order of the free democracies of Europe with the object of safeguarding their common heritage of political traditions, ideals, freedom and the rule of law;
>
> …
>
> [T]he obligations undertaken by the High Contracting Parties in the Convention are essentially of an objective character, being designed rather to protect the fundamental rights of individual human beings from infringement by any of the High Contracting Parties than to create subjective and reciprocal rights for the High Contracting Parties themselves…[566]

402. Hence it has to be concluded that the source of a norm cannot be said to be decisive as to whether that norm gives rise to obligations *erga omnes* or not.[567] It is rather the character of primary norms that determines the nature of secondary rules.

403. That obligations *erga omnes* can indeed be based on treaty norms has also been confirmed by the Institute of International Law. Its resolution entitled "Obligations

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[560] *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (see footnote 534 above), pp. 199–200, paras. 155 and 159.

[561] *Ibid.*, p. 200, para. 159. This did not, however, go uncontested by the other judges. Thus, Judge Higgins in her separate opinion stated that, "unlike the Court", she did not think that "the specified consequence of the identified violations of international law ha[d] anything to do with the concept of *erga omnes*", continuing: "The Court's celebrated dictum in *Barcelona Traction ...* is frequently invoked for more than it can bear. Regrettably, this is now done also in this Opinion … That dictum was directed to a very specific issue of jurisdictional *locus standi*. … It has nothing to do with imposing substantive obligations on third parties to a case." She added: "That an illegal situation is not to be recognized or assisted by third parties is self-evident, requiring no invocation of the uncertain concept of '*erga omnes*'. … The obligation upon United Nations Members not to recognize … and not to lend support or assistance relie[s] in no way whatever on '*erga omnes*'" (*ibid.*, p. 216, paras. 37–38, separate opinion of Judge Higgins).

[562] *Barcelona Traction, Light and Power Company, Limited* (see footnote 524 above), p. 47, para. 91.

[563] Seiderman (see footnote 536 above), pp. 136–137. Likewise, in the *East Timor* case, the International Court of Justice held that "the *erga omnes* character of a norm and the rule of consent to jurisdiction are two different things. Whatever the nature of the obligations invoked, the Court could not rule on the lawfulness of the conduct of a State when its judgment would imply an evaluation of the lawfulness of the conduct of another State which is not a party to the case. Where this is so, the Court cannot act, even if the right in question is a right *erga omnes*" (*East Timor (Portugal v. Australia)*, Judgment, *I.C.J. Reports 1995*, p. 90, at p. 102, para. 29). See also *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (footnote 534 above), p. 216, para. 37 (separate Opinion of Judge Higgins), where she states that the *dictum* in *Barcelona Traction* was directed to a very specific issue of jurisdictional *locus standi*.

[564] For the suggestion of using the *erga omnes* concept to empower non-State actors, see, for example, H. Charlesworth and C. Chinkin, *The Boundaries of International Law: A Feminist Analysis*, Manchester, Manchester University Press, 2000, pp. 94–95.

[565] Decision of the Commission as to the admissibility of application No. 788/60 lodged by the Government of the Federal Republic of Austria against the Government of the Republic of Italy, 11 January 1961, *Yearbook of the European Convention on Human Rights 1961*, vol. 4, p. 116.

[566] *Ibid.*, pp. 138, 140.

[567] See also Annacker (footnote 547 above), p. 136, who argues that "[t]he source of a norm by itself does not allow any conclusions regarding the structure of the obligations imposed and of the rights conceded by the primary norm or the régime of responsibility (secondary norms)."

erga omnes in international law", adopted in 2005, defines an obligation *erga omnes* as:

(*a*) an obligation under general international law that a State owes in any given case to the international community, in view of its common values and its concern for compliance, so that a breach of that obligation enables all States to take action; or

(*b*) an obligation *under a multilateral treaty** that a State party to the treaty owes in any given case to all the other States parties to the same treaty, in view of their common values and concern for compliance, so that a breach of that obligation enables all these States to take action.[568]

4. The relationship between *jus cogens* and *erga omnes* obligations

404. The close relationship between *jus cogens* and the notion of *erga omnes* obligations is a constant source of confusion. *Jus cogens* norms are particularly important norms that are distinguished by their non-derogability. A norm that conflicts with them is, as we have seen, null and void. Obligations *erga omnes* are obligations in the fulfilment of which every State ("the international community as a whole") has a legal interest. It is likely that all States have a legal interest in the observance of rules from which no derogation is permitted. In this sense, it is plausible to assume that all *jus cogens* norms constitute *erga omnes* obligations. But the equation does not work the other way around. From the fact that all States have an interest in the fulfilment of an obligation it does not necessarily follow that those norms are peremptory—that is to say, they do not necessarily render conflicting obligations null and void.

405. In its commentary to the draft articles on responsibility of States for internationally wrongful acts, the Commission elaborated the relationship between *jus cogens* and obligations *erga omnes* as follows:

While peremptory norms of general international law focus on the scope and priority to be given to a certain number of fundamental obligations, the focus of obligations to the international community as a whole is essentially on the legal interest of all States in compliance—i.e. in terms of the present articles, in being entitled to invoke the responsibility of any State in breach. Consistently with the difference in their focus, it is appropriate to reflect the consequences of the two concepts in two distinct ways. First, serious breaches of obligations arising under peremptory norms of general international law can attract additional consequences, not only for the responsible State but for all other States. Secondly, all States are entitled to invoke responsibility for breaches of obligations to the international community as a whole.[569]

406. In the *Furundžija* case, the International Tribunal for the Former Yugoslavia made clear the relationship between the procedural thrust of *erga omnes* obligations and the linkage of *jus cogens* to normative hierarchy:

While the *erga omnes* nature just mentioned appertains to the area of international enforcement (*lato sensu*), the other major feature of the principle proscribing torture relates to the hierarchy of rules in the international normative order.[570]

5. Conclusion

407. The discussion of hierarchy confirms the conclusions already reached at the end of the foregoing chapters. Although there is no single, fixed set of hierarchical relationships among the rules, principles and obligations of international law, this does not mean that relations of superiority and inferiority are non-existent, only that what they are cannot be determined in an abstract way, irrespective of the contexts in which some norms (rules, principles) are invoked against countervailing considerations. Although it is customary to deal with hierarchy in international law in terms of *jus cogens* norms and *erga omnes* obligations, it is not clear that these are the only—or indeed the most practically relevant—cases. As we saw in chapters II and III above, there are other important rules—for example treaty rules of an "integral" and "interdependent" nature, "intransgressible principles", "elementary considerations of humanity" and treaty clauses that cannot be violated without simultaneously undermining the object and purpose of the treaty—that play a more significant role in the practice of legal reasoning. It may be that focus on the well-known Latin maxims has diverted attention from these more mundane types of relationships of importance.

408. However, this section has emphasized the clear difference that exists between *jus cogens* norms and obligations *erga omnes*. The former have to do with the normative "weight" of a norm, the latter with its procedural "scope". While a *jus cogens* norm necessarily has an *erga omnes* scope, not all *erga omnes* obligations have weight as *jus cogens*. And while it is true that which norms belong to these classes remains to be argued separately every time, a solid professional consensus has been building through the 1990s on the nature of at least some prohibitions as being that of *jus cogens* and the violation of some obligations as providing a standing for non-injured States. Though the categories nevertheless remain fluid, this does not mean that they are meaningless. On the contrary, their relative openness allows their reasonable use in particular situations of normative conflict (*jus cogens*) or when having to decide on standing in regard to some obligations (obligations *erga omnes*).

409. But law is a systematic craft, and debates on superior and inferior norms remain a fertile ground for deliberating "constitutionalization" and fragmentation. Article 103 of the Charter of the United Nations certainly suggests the hierarchically higher status of the Charter over other parts of international law, while the very idea of *jus cogens* suggests that even United Nations policies may meet with a "constitutional" limit. Of course, there no longer persists a meaningful challenge to the notion of

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[568] *Annuaire de l'Institut de Droit international*, vol. 71-II (Session of Krakow, 2005—Second Part), p. 287, art. 1. See also the fourth report on State responsibility by Gaetano Arangio-Ruiz, Special Rapporteur (A/CN.4/444 and Add.1–3) (footnote 203 above), p. 34, para. 92, stating that "[t]his legal structure [obligations *erga omnes*] is typical not only of peremptory norms, but also of other norms of general international law and of a number of multilateral treaty rules (*erga omnes partes* obligations)".

[569] Para. (7) of the general commentary to part II, chap. III, of the draft articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 111–112. Michael Byers has depicted the same relationship in the following terms: "*Jus cogens* rules, otherwise known as 'peremptory rules', are non-derogable rules of international 'public policy'. They render void other, non-peremptory rules which are in conflict with them. *Erga omnes* rules, on the other hand, are rules which, if violated, give rise to a general right of standing—amongst all States subject to those rules—to make claims" (Byers, "Conceptualising the relationship between *jus cogens* and *erga omnes* rules" (see footnote 549 above), p. 211).

[570] *Prosecutor v. Anto Furundžija* (see footnote 502 above), *Judicial Reports 1998*, p. 569, para. 153; ILR, vol. 121 (2002), p. 260.

jus cogens. Any actual disputes relate to the determination of its content, in particular with respect to the characterization of some action or event. Here, everything depends on the development of political preferences.[571] Nevertheless, the importance of the notion—like the importance of *erga omnes* obligations—may lie less in the way the concept is actually "applied" than as a signal of argumentative possibilities and boundaries for institutional decision-making. To that extent, these notions alleviate the extent to which international law's fragmentation may seem problematic.

[571] In this regard, particularly important are the deliberations of the Court of First Instance of the European Communities in case T-306/01, *Ahmed Ali Yusuf and Al Barakaat International Foundation v. Council of the European Union and Commission of the European Communities* (see footnote 485 above). As pointed out above, the Court stated that it had the competence to examine the conformity of United Nations Security Council decisions with *jus cogens*. At one point it speculated about "fundamental rights of the human person falling within the ambit of *jus cogens*" (para. 286), indicating that not all "fundamental rights" were by the same token *jus cogens*. However, in a later passage the Court went on to assess "whether the freezing of funds … infringes the applicants' fundamental rights" (para. 288), thereby in fact conflating the two categories—"fundamental rights" and "*jus cogens*". This wide understanding of *jus cogens* also surfaces in the Court's view that an "arbitrary deprivation" of the right to property "might, in any case, be regarded as contrary to *jus cogens*" (para. 293). Also of interest is the Court's view that while the right of access to the courts did possess *jus cogens* status, this did not mean that it was unlimited. On the contrary, its limitation by action taken in pursuit of Article 103 of the Charter appeared to be "inherent in that right as it is guaranteed by *jus cogens*" (para. 343).

Chapter V

Systemic integration and article 31, paragraph 3 (*c*), of the Vienna Convention on the Law of Treaties

A. Introduction: the "principle of systemic integration"

410. The previous chapters dealt with three types of relationship between rules and principles (norms) of international law: relations between special and general norms, between prior and subsequent norms, and between rules and principles with different normative power. In each chapter, the argument was that legal technique was perfectly capable of resolving normative conflicts or overlaps by putting these rules and principles in a determinate relationship with each other. The chapters highlighted that there was nothing automatic or mechanical about this process. The way the relevant techniques (*lex specialis*, *lex posterior* and *lex superior*) operated was dependent on what should be considered the relevant aspects of each case. Whether a rule's speciality or generality should be decisive, or whether priority should be given to the earlier or to the later rule, depended on such aspects as the will of the parties, the nature of the instruments and their object and purpose, as well as what would be a reasonable way to apply them with minimal disturbance to the operation of the legal system.

411. Alongside contextuality, another conspicuous feature in the preceding surveys of international practice has been the effort to avoid invalidating the norm that will be set aside, with only the abstract and so far substantially quite thin doctrine of *jus cogens* as an exception. In other words, care has been taken not to suggest that a treaty duly adopted or a custom followed by States would become, in some respect, altogether without legal effect. This has been achieved in particular through two techniques. First is the effort to harmonize apparently conflicting norms by interpreting them so as to render them compatible. Second is the technique whereby the question of validity has been replaced by a question of priority. The norm that will be set aside will remain as it were "in the background", continuing to influence the interpretation and application of the norm to which priority has been given.

412. It follows that, contrary to what is sometimes suggested, conflict resolution and interpretation cannot be distinguished from each other. Whether there is a conflict and what can be done with *prima facie* conflicts depends on the way the relevant rules are interpreted. This cannot be stressed too much. Interpretation does not intervene only once it has already been ascertained that there is a conflict. Rules appear to be compatible or in conflict *as a result of interpretation*. Sometimes it may be useful to stress the conflicting nature of two rules or sets of rules so as to point to the need for legislative intervention. Often, however, it seems more appropriate to play down that sense of conflict and to read the relevant materials from the perspective of their contribution to some generally shared—"systemic"—objective. The technique of "mutual supportiveness" provided an example of this. But whichever way one goes, the process of reasoning follows well-worn legal pathways: references to normal meaning, party will, legitimate expectations, good faith and subsequent practice, as well as the "object and purpose" and the principle of effectiveness. And finally, if a definite priority must be established, this may, as we have seen above, be achieved through three criteria: (*a*) specificity (*lex specialis*); (*b*) temporality (*lex posterior*); and (*c*) status (*jus cogens*, obligations *erga omnes* and Article 103 of the Charter of the United Nations).

413. It is therefore not a surprise that the 1969 Vienna Convention deals with the plurality of rules and principles in the context of treaty interpretation. In particular, article 31, paragraph 3 (*c*), may be taken to express what may be called the principle of "systemic integration"[572]—the process surveyed all through this report—whereby international obligations are interpreted by reference to their normative environment ("system"). Article 31, paragraph 3 (*c*), of the Convention provides:

[572] Combacau and Sur, *Droit international public* (footnote 507 above), p. 175, and, in much more detail, C. McLachlan, "The principle of systemic integration and article 31 (3) (*c*) of the Vienna Convention", *International and Comparative Law Quarterly*, vol. 54, No. 2 (April 2005), p. 279.

> There shall be taken into account, together with the context:
>
> …
>
> (*c*) Any relevant rules of international law applicable in the relations between the parties.

414. The rationale for such a principle is understandable. All treaty provisions receive their force and validity from general law and set up rights and obligations that exist alongside rights and obligations established by other treaty provisions and rules of customary international law. None of these rights and obligations has any *intrinsic* priority over the others. The question of their relationship can only be approached through a process of reasoning that makes them appear as parts of some coherent and meaningful whole. This is why, as pointed out by McNair, they must also be "applied and interpreted against the background of the general principles of international law".[573] Or, as the Arbitral Tribunal in the *Georges Pinson* case noted, a treaty must be deemed to refer to such principles for all questions which it does not itself resolve expressly and in a different way.[574] Reference to general rules of international law in the course of interpreting a treaty is an everyday, often unconscious part of the interpretation process. We have surveyed how this takes place in connection with the operation of special (and not "self-contained") regimes in chapter II above. In the activity of specialized treaty bodies, a solid legal background is constantly presumed in a non-controversial way. No tribunal will ask for evidence of the rule of *audiatur et altera pars* or call into question the nature of a United Nations Member as a "State". These matters are taken as given, and if a party challenges the relevance of any such procedural standard or public law status, then it is up to that party to justify its (unorthodox) case.

415. But the principle of systemic integration goes further than merely restating the applicability of general international law in the operation of particular treaties. It points to a need to take into account the normative environment more widely. Nor is this anything new. Thus, for example, the Arbitral Tribunal in a Franco-Belgian case from 1937 was able to hold as follows, without any further explanation:

> *[A]bstraction faite de cette interprétation grammaticale et logique, il faut tenir compte du fait qu'il faut placer et interpréter l'accord Tardieu-Jaspar dans le cadre des accords de La Haye de janvier 1930, c'est-à-dire dans le cadre du Plan Young qui détermine soigneusement par quelle méthode les "paiements allemands" et les "transferts allemands" s'effectueront…*[575]

416. In this case, one treaty was interpreted by reference to another treaty. It was obvious that the Franco-Belgian issue had a relationship to the overall effort to settle the German reparations problem and that this fact—the linkage of the treaty to that general settlement—could not be ignored in the interpretation of the agreement. More generally, if it is indeed the point of international law to coordinate relations between States, then it follows that specific norms must be read against other norms bearing upon the same facts as the treaty under interpretation. A case in point is what Fitzmaurice called "chains" of treaties that grapple with the same type of problem at different levels or from particular (technical, geographical) points of view.[576] As the Arbitral Tribunal in the *Southern Bluefin Tuna* case (2000) put the point:

> it is a commonplace of international law and State practice for more than one treaty to bear upon a particular dispute. … There is frequently a parallelism of treaties … The current range of international legal obligations benefits from a process of accretion and cumulation …[577]

417. In the era of framework treaties and implementation treaties, this seems self-evident. The doctrine of "treaty parallelism" addresses precisely the need to coordinate the reading of particular instruments or to see them in a "mutually supportive" light. At issue in the *Southern Bluefin Tuna* case was the relationship between the 1982 United Nations Convention on the Law of the Sea and a fisheries treaty concluded for the implementation of the former. It would have been awkward, and certainly not in accord with the intent of the parties, to read those instruments independently from each other. Although how that relationship should be conceived—were they part of what in chapter III, section B.1, above was called a "regime" or were they not?—may remain the subject of some debate (particularly in view of the overlapping provisions on dispute settlement), the Tribunal itself fully realized that it could not ignore the fact that the problem arose under both treaties.[578]

418. Yet the problem is not limited to relationships between framework treaties and implementation treaties (after all, these characterizations have no determined content). Surely deciding which treaty is applicable or how a tribunal's jurisdiction is delimited cannot be dependent on how a State chooses to characterize a problem? Daillier and Pellet make the general point clearly:

> *Un traité ne peut être considéré isolément. Non seulement il est ancré dans les réalités sociales, mais encore ses dispositions doivent être confrontées avec d'autres normes juridiques avec lesquelles elles peuvent entrer en concurrence.*[579]

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[573] McNair (see footnote 58 above), p. 466.

[574] *Georges Pinson (France) v. United Mexican States* (see footnote 244 above), p. 422.

[575] "Based on this grammatical and logical interpretation, it must be borne in mind that the Tardieu–Jaspar Agreement must be situated and interpreted in the context of the Hague Agreements of January 1930, *i.e.* within the framework of the Young Plan, which meticulously defines the methods by which the 'German payments' and 'German transfers' are to be made": *Différend concernant l'Accord Tardieu-Jaspar (Belgium/France),* Award of 1 March 1937, UNRIAA, vol. III (Sales No. 1949.V.2), p. 1701, at p. 1713.

[576] Third report on the law of treaties by Gerald Fitzmaurice, Special Rapporteur (A/CN.4/115) (see footnote 139 above), p. 44, para. 89 (*b*).

[577] *Southern Bluefin Tuna Case between Australia and Japan and between New Zealand and Japan* (see footnote 26 above), p. 40, para. 52.

[578] For the debate concerning the problems that emerge as a result of the Tribunal's preferring the dispute settlement provisions of the regional treaty (Convention for the Conservation of Southern Bluefin Tuna) to the (compulsory) provisions of Part XV of the United Nations Convention on the Law of the Sea, see J. Peel, "A paper umbrella which dissolves in the rain? The future for resolving fisheries disputes under UNCLOS in the aftermath of the *Southern Bluefin Tuna* arbitration", *Melbourne Journal of International Law*, vol. 3, No. 1 (May 2002), p. 53, and B. Kwiatkowska, "*The Ireland v. United Kingdom (MOX Plant)* case: applying the doctrine of treaty parallelism", *International Journal of Marine and Coastal Law*, vol. 18, No. 1 (March 2003), p. 1, at p. 52 and footnotes.

[579] "A treaty cannot be considered in isolation. Not only is it anchored in social realities; its provisions must also be confronted with other, potentially competing, legal rules": Daillier and Pellet (see footnote 74 above), p. 266.

419. None of this predetermines what it means to "confront" a norm with another or how they might enter into "competition". These matters must be left to the interpreter to decide in view of the situation. The point—but it is a key point—is simply that the normative environment cannot be ignored and that, when interpreting treaties, the principle of integration should be borne in mind. This points to the need to carry out interpretation such that the rules are seen in the light of some comprehensible and coherent objective, so as to prioritize concerns that are more important at the cost of less important objectives. This is all that article 31, paragraph 3 (*c*), requires: the integration into the process of legal reasoning—including reasoning by courts and tribunals—of a sense of coherence and meaningfulness. Success or failure here is measured by how the legal world views the outcome.

420. This chapter may be understood as an elucidation of the place and operation of article 31, paragraph 3 (*c*), of the 1969 Vienna Convention, but also as a summary of much of what has been said in previous chapters. The systemic nature of international law has received its clearest formal expression in that provision. As was suggested by Ms. Hanqin Xue during debates in the Commission on the significance of article 31, paragraph 3 (*c*), this provision operates like a "master key" to the house of international law.[580] If there is a systemic problem—an inconsistency, a conflict, an overlap between two or more norms—and no other interpretative means provides a resolution, then recourse may always be had to that provision in order to proceed in a reasoned way.

421. It may of course often be the case that no formal reference to article 31, paragraph 3 (*c*), is needed because other techniques sufficiently cover the need to take into account the normative environment. As we have seen, customary law, general principles of law and general treaty provisions form the interpretative background for specific treaty provisions, and it often suffices to refer to them to attain systemic integration. Sometimes article 31, paragraph 3 (*c*), is taken as merely confirming this. For example, in the recent arbitration between France and the Netherlands concerning the application of the Convention on the Protection of the Rhine against Pollution from Chlorides (2004), the Tribunal was requested to apply article 31, paragraph 3 (*c*), by one of the parties in support of its contention that the "polluter-pays" principle might be applicable in the affair. The Tribunal examined this contention, noting as follows:

ce principe figure dans certains instruments internationaux, tant bilatéraux que multilatéraux, et se situe à des niveaux d'effectivité variables. Sans nier son importance en droit conventionnel, le Tribunal ne pense pas que ce principe fasse partie du droit international général.[581]

422. But if that were all article 31, paragraph 3 (*c*), covered, it would have been unnecessary. Its wording, however, is not restricted to "general international law" but extends to "[a]ny relevant rules of international law applicable in the relations between the parties". Adding the word "general" was proposed in the Commission, but it was not included. The predominant, though not exclusive, references in the Commission were to other treaty rules. Whether, in the case of multilateral treaties, this requires that all parties to a treaty to be interpreted are also parties to the other treaties "to be taken into account" will be discussed below.[582]

423. It is sometimes suggested that international tribunals or law-applying (treaty) bodies are not entitled to apply law that goes "beyond" the four corners of the constituting instrument or that, when arbitral bodies deliberate an award, they ought not to take into account rules or principles that are not incorporated in the treaty under dispute or the relevant *compromis*. But if, as discussed in chapter I, section E, above, all international law exists in a systemic relationship with other law, no such application can take place without situating the relevant jurisdiction-endowing instrument in its normative environment.[583] This means that, although a tribunal may only have jurisdiction in regard to a particular instrument, it must always *interpret* and *apply* that instrument in the context of its relationship to its normative environment—that is to say "other" international law.[584] This is the principle of systemic integration to which article 31, paragraph 3 (*c*), of the 1969 Vienna Convention gives expression. It is true that the formulation of article 31, paragraph 3 (*c*), has been criticized as unclear, both in its substantive and temporal scope and in its normative force. To what extent should "other law" be taken into account? What about prior or later law? And what does "taking into account" really mean? As Judge Weeramantry noted in the *Gabčikovo-Nagymaros* case, the provision "scarcely covers this aspect with the degree of clarity requisite to so important a matter".[585] Thirlway even doubts "whether this sub-paragraph will be of any assistance in the task of treaty interpretation".[586] But if the provision is merely the expression of a larger principle—that of "systemic integration"—and if that principle, again, expresses a reasonable or even necessary aspect of the practice of legal reasoning, then a discussion of its actual and potential uses would constitute a useful contribution to the study of the alleged fragmentation (or diversification) of international law.

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[580] McLachlan (see footnote 572 above), pp. 280–281.

[581] "[T]his principle appears in some international treaties, both bilateral and multilateral, and is applicable at different levels. Without denying its importance in treaty law, the Tribunal does not consider it part of general international law": *Case concerning the audit of accounts between the Netherlands and France in application of the Protocol of 25 September 1991 Additional to the Convention for the Protection of the Rhine from Pollution by Chlorides of 3 December 1976 (the Netherlands/France),* award of 12 March 2004, UNRIAA, vol. XXV (Sales No. E/F.05.V.5), p. 267, at p. 312, para. 103.

[582] The (very limitative) suggestion that they should be was recently made by a WTO Panel in *European Communities—Measures Affecting the Approval and Marketing of Biotech Products*, WTO Panel reports, WT/DS291/R and Add.1–9 and Corr.1, WT/DS292/R and Add.1–9 and Corr.1, WT/DS293/R and Add.1–9 and Corr.1, adopted 21 November 2006, paras. 7.70–7.72.

[583] In this regard, see also Pauwelyn, *Conflict of Norms…* (footnote 21 above), pp. 460–463 and *passim*.

[584] This is not to say that it would in practice be easy—or even possible—to distinguish these aspects from each other. Indeed, the impossibility of doing so was a key reason why the Commission refrained from adopting any rule on inter-temporal law (see section D.3 below). The point is conceptual and refers to the way any right or obligation is double-sided—a creation of a treaty that is "applicable" and in substance determined through "interpretation".

[585] *Gabčíkovo-Nagymaros Project* (see footnote 119 above), p. 114 (separate opinion of Judge Weeramantry).

[586] H. Thirlway, "The law and procedure of the International Court of Justice 1960–1989 (Part Three)", *British Year Book of International Law 1991*, vol. 62, p. 1, at p. 58.

B. Article 31, paragraph 3 (*c*), of the Vienna Convention on the Law of Treaties

1. Construction

424. Article 31, paragraph 3 (*c*), is placed within part III, section 3, of the 1969 Vienna Convention, which deals with the interpretation of treaties. Article 31 provides the "general rule of interpretation" in the following terms:

> 1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.
>
> 2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes:
>
> (*a*) Any agreement relating to the treaty which was made between all the parties in connexion with the conclusion of the treaty;
>
> (*b*) Any instrument which was made by one or more parties in connexion with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty.
>
> 3. There shall be taken into account, together with the context:
>
> (*a*) Any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions;
>
> (*b*) Any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation;
>
> (*c*) Any relevant rules of international law applicable in the relations between the parties.
>
> 4. A special meaning shall be given to a term if it is established that the parties so intended.

425. According to paragraph 3, three matters, not ranked in any particular order of priority, should be taken into account in treaty interpretation in addition to the context. The third of them is "any relevant rules of international law applicable in the relations between the parties". These provisions form a mandatory part of the interpretation process. Unlike the provision in article 32, on *travaux préparatoires* as a "supplementary means of interpretation", they are to be referred where the meaning of treaty terms is ambiguous, obscure, absurd or unreasonable.[587]

426. Textual analysis of article 31, paragraph 3 (*c*), reveals a number of aspects of the rule which deserve emphasis:

(*a*) It refers to "rules of international law", thus emphasizing that the reference for interpretation purposes must be to rules of law, and not to broader principles or considerations that may not be firmly established as rules;

(*b*) The formulation refers to rules of international law in general. The words cover all the sources of international law, including custom, general principles and, where applicable, other treaties;

(*c*) Those rules must be both relevant and "applicable in the relations between the parties". The sub-paragraph does not specify whether, in determining relevance and applicability, one must have regard to all parties to the treaty in question, or merely to those in dispute;

(*d*) The sub-paragraph contains no temporal provision. It does not state whether the applicable rules of international law are to be determined as at the date on which the treaty was concluded, or at the date on which the dispute arises.

427. Articles 31 and 32 of the 1969 Vienna Convention are, of course, widely assumed to reflect customary international law.[588] Their appeal may be attributable to the fact that they adopt a set of practical considerations that are familiar from the national context and at the same time general and flexible enough to provide a reasonable response to most interpretative problems. The Convention avoids taking a stand on any of the great doctrinal debates on interpretation. The articles adopt both an "ordinary meaning" and a "purposive" approach; they look for party consent, as well as what is in accordance with good faith. It is in fact hard to think of any approach to interpretation that would be excluded from articles 31 and 32.[589] Yet the Convention does not purport to be an exhaustive statement of interpretive techniques—there is no mention, for example, of *lex specialis* or *lex posterior*.

428. In State practice and the practice of international tribunals, particular approaches to interpretation have of course developed. It has become a practice of human rights bodies to adopt readings of human rights conventions that look for their *effet utile* (practical effect) in a context perhaps wider than for regular treaties. Certain treaties establishing international institutions have become interpreted in "constitutional" terms. Recent experience in WTO, where the Appellate Body has been insisting that panels take the Convention's rules seriously, shows just how exacting a proper application of its principles may be.[590] Although the Convention does not require the interpreter to apply the process in the order listed in articles 31 and 32, that order is in fact intuitively likely to represent an effective sequence in which to approach the task. But there is no reason to separate these techniques too sharply from each other. As will be seen below, sometimes external sources may usefully clarify the ordinary meaning of treaty words, or a treaty's object and purpose.

2. The International Law Commission's debates

429. The text of what now is article 31, paragraph 3 (*c*), of the 1969 Vienna Convention arose in the Commission from draft articles dealing with the interpretation of treaties. Paragraph 1 (*b*) of draft article 70, proposed by Waldock to the Commission in 1964, suggested that:

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[587] This was also confirmed by the WTO Panel in *European Communities—Measures Affecting the Approval and Marketing of Biotech Products* (see footnote 582 above), para. 7.69.

[588] See the summary of State practice, jurisprudence and doctrinal writings in Villiger (footnote 77 above), pp. 334–343. Of the more recent practice, see *Territorial Dispute (Libyan Arab Jamahiriya/Chad)* (footnote 155 above); *Kasikili/Sedudu Island (Botswana/Namibia)* (footnote 243 above), p. 1059, para. 18; *LaGrand (Germany v. United States of America)*, Judgment, *I.C.J. Reports 2001*, p. 466, at p. 501, para. 99. See also *Golder v. the United Kingdom*, European Court of Human Rights (footnote 238 above), p. 14, para. 29; *Restrictions to the Death Penalty (Arts. 4(2) and 4(4) American Convention on Human Rights)*, Inter-American Court of Human Rights (footnote 161 above); and, for example, *United States—Standards for Reformulated and Conventional Gasoline*, WTO Appellate Body report (footnote 48 above), pp. 19 *et seq.*

[589] That the interpretative techniques cannot be firmly prioritized is discussed in Koskenniemi, *From Apology to Utopia…* (see footnote 79 above), pp. 333–345.

[590] See the cases discussed below and, more generally, Cameron and Gray, "Principles of international law…" (footnote 173 above), p. 248.

The terms of a treaty shall be interpreted in good faith in accordance with the natural and ordinary meaning to be given to each term— [and]…

(*b*) in the context of the rules of international law in force at the time of the conclusion of the treaty.[591]

430. The provision had two parts. One was the expression of the principle of systemic integration—namely that treaties should be interpreted "in the context of the rules of international law". Throughout the ensuing discussion, this principle was taken for granted. Nobody challenged the idea that treaties were to be read in the context of their normative environment. Some members did suggest that the reference therein might be to "principles" rather than "rules" or speculated about the addition of the word "general" ("general rules" or "general principles").[592] In the end, however, none of these suggestions found their way into the text.

431. All the discussion and controversy in the Commission was addressed to the second part of the provision: the suggestion that the normative environment should be constructed on the basis of the law in force at the moment of the conclusion of the treaty. This was the problem of inter-temporal law. In this regard, the provision was a synthesis of a resolution of the Institute of International Law, calling for interpretation "in the light of the principles of international law",[593] and a formulation by Fitzmaurice that emphasized the principle of contemporaneity.[594] In Waldock's original proposal, an additional rule (draft article 56, ultimately omitted from the Convention) dealt specifically with inter-temporal law as follows:

1. A treaty is to be interpreted in the light of the law in force at the time when the treaty was drawn up.

2. Subject to paragraph 1, the application of a treaty shall be governed by the rules of international law in force at the time when the treaty is applied.[595]

432. Although the proposal to incorporate a provision on inter-temporal law did not find favour with the Commission in 1964, the issue continued to provoke controversy in the context of the provision on treaty interpretation. As a result, the Commission's commentary confines its discussion on the meaning and application of what is now article 31, paragraph 3 (*c*), to an account of the discussion on inter-temporality.[596] Nevertheless, it is useful to note here what is presumed in this discussion, as well as in the whole doctrine of inter-temporality. This is the view that the interpretation and application of a treaty always takes place by reference to other rules of international law and that the only question is whether these "other rules" should be conceived in terms of the normative situation at the conclusion of the treaty or at the moment of its application.[597] As some Commission members observed, this followed from the very objective of tracing party intent, for that intent was certainly influenced by the rules in force at the time when the treaty was negotiated and adopted but developed over the course of the treaty's lifespan.[598]

C. Case law

433. Until recently, there were few references to article 31, paragraph 3 (*c*), in judicial or State practice.

1. Iran–United States Claims Tribunal

434. The Tribunal has always found customary international law applicable. In an early case, it expressly confirmed that "the rules of customary law may be useful in order to fill in possible *lacunae* of the Treaty [of Amity between Iran and the United States of 1955], to ascertain the meaning of undefined terms in its text or, more generally, to aid interpretation and implementation of its provisions".[599] The issue which prompted a specific reference to article 31, paragraph 3 (*c*), was the determination of the nationality requirements imposed by the Algiers Accords in order to establish who might bring a claim before the Tribunal. Thus, in *Esphahanian v. Bank Tejarat,* the question arose of whether a claimant who had dual Iran/United States nationality might bring a claim before the Tribunal.[600] The Tribunal expressly deployed article 31, paragraph 3 (*c*), of the 1969 Vienna Convention in order to justify reference to a wide range of materials on the law of diplomatic protection in international law.[601] These materials supported the Tribunal's conclusion that "the applicable rule of international law [was] that of dominant and effective nationality".[602]

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[591] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (see footnote 323 above), p. 52.

[592] See especially the statement by Mr. Tunkin at the Commission's 765th meeting, held on 14 July 1964, *Yearbook ... 1964*, vol. I, pp. 278–279, para. 49.

[593] Resolution of the Institute of International Law on the interpretation of treaties, *Annuaire de l'Institut de droit international*, vol. 46 (Session of Granada, 1956), pp. 364–365. Inclusion of this reference in the Institute's resolution had had a controversial history. It did not appear in Lauterpacht's original scheme in 1950 (*ibid.*, vol. 43-I (Session of Bath, 1950), p. 433). A reference to the interpretative role of general principles of customary international law was subsequently added by him in 1952 (*ibid.*, vol. 44-I (Session of Sienna, 1952), p. 223). It faced considerable opposition on grounds of uncertainty and inconsistency with the Institute's codification role (*ibid.*, vol. 44-II, pp. 384–6, remarks by Guggenheim and Rolin; see also *ibid.*, vol. 45-I (Session of Aix-en-Provence, 1954), p. 228). When Fitzmaurice was appointed to replace Lauterpacht as Rapporteur, there was no reference of this kind in his draft (*ibid.*, vol. 46, pp. 337–338). It was only added in the course of the debate, following an intervention by Basdevant (*ibid.*, p. 344).

[594] Sir Gerald Fitzmaurice, *The Law and Procedure of the International Court of Justice*, vol. I, Cambridge, Grotius, 1986, p. 369.

[595] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (see footnote 323 above), pp. 8–9.

[596] Draft articles on the law of treaties with commentaries adopted by the International Law Commission at its eighteenth session, *Yearbook ... 1966*, vol. II, document A/6309/Rev.1, part II, p. 222, para. (16) of the commentary to draft article 27.

[597] See the third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (footnote 323 above), pp. 8–10; see also the debate within the Commission in *Yearbook ... 1964*, vol. I, pp. 33–40, summary records of the Commission's 728th and 729th meetings, held on 21 and 22 May 1964, respectively.

[598] See, for example, the statement by Mr. Paredes at the Commission's 728th meeting, *Yearbook ... 1964*, vol. I, p. 34, para. 12.

[599] *Amoco International Finance Corporation v. The Government of the Islamic Republic of Iran* (see footnote 125 above), p. 222, para. 112.

[600] *Nasser Esphahanian v. Bank Tejarat*, Iran–United States Claims Tribunal, case No. 157, 29 March 1983, 2 IRAN–U.S. C.T.R., p. 157.

[601] *Ibid.*, p. 161.

[602] *Ibid.* See also, to like effect, Iran–United States Claims Tribunal, case No. A/18, 6 April 1984, 5 IRAN–U.S. C.T.R., p. 251, at p. 260. The provision was also relied upon in a dissent in *Grimm v. Iran*, case No. 71, 18 February 1983, 2 IRAN–U.S. C.T.R., p. 78, at p. 82 (dissenting opinion of Howard M. Holtzmann, on the question of whether

2. European Court of Human Rights

435. As pointed out in chapter II above, the European Court of Human Rights has routinely applied general international law. It has made specific reference to article 31, paragraph 3 (*c*), however, in construing the scope of the right to a fair trial protected by article 6 of the European Convention on Human Rights. In *Golder v. the United Kingdom,* the Court referred to article 31, paragraph 3 (*c*), when it had to determine whether article 6 guaranteed a right of access to the courts for every person wishing to commence an action to have his civil rights and obligations determined.[603] Through that route, the Court referred in turn to Article 38, paragraph 1 (*c*), of the Statute of the International Court of Justice as recognizing that the rules of international law included "general principles of law recognized by civilized nations".[604] It found that a right of access to the civil courts was one such general principle of law, and that this could be relied upon in interpreting the meaning of article 6.

436. In *Loizidou v. Turkey,* the Court had to decide whether to recognize as valid certain acts of the Turkish Republic of Northern Cyprus.[605] It invoked article 31, paragraph 3 (*c*), as a basis for referring to United Nations Security Council resolutions and evidence of State practice supporting the proposition that the Turkish Republic of Northern Cyprus was not regarded as a State under international law.[606] The Republic of Cyprus remained the sole legitimate Government in Cyprus and acts of the Turkish Republic of Northern Cyprus were not to be treated as valid.

437. In a trio of landmark decisions in 2001, the European Court of Human Rights utilized article 31, paragraph 3 (*c*), in order to decide whether the rules of State immunity might conflict with the right of access to court under article 6, paragraph 1, of the European Convention on Human Rights.[607] In each case, the Court decided by majority to give effect to State immunity. The right of access to the courts was not absolute. It could be subject to restrictions, provided that they were proportionate and pursued a legitimate aim. In making that assessment, the Court reasoned as follows:

> the Convention has to be interpreted in the light of the rules set out in the [1969] Vienna Convention … and … Article 31 § 3 (*c*) … indicates that account is to be taken of "any relevant rules of international law applicable in the relations between the parties". The Convention, including Article 6, cannot be interpreted in a vacuum. The Court must be mindful of the Convention's special character as a human rights treaty, and it must also take the relevant rules of international law into account … The Convention should so far as possible be interpreted in harmony with other rules of international law of which it forms part, including those relating to the grant of State immunity.
>
> It follows that measures taken by a High Contracting Party which reflect generally recognised rules of public international law on State immunity cannot in principle be regarded as imposing a disproportionate restriction on the right of access to a court as embodied in Article 6 § 1.[608]

438. It is useful to note that here the Court might have simply brushed aside State immunity as not relevant to the application of the Convention. But it did not do so. The conflict between article 6 and rules of customary international law on State immunity emerged only because the Court decided to integrate article 6 into its normative environment (doubtless because that is what was claimed by the respondent). The right provided under the Convention was weighed against the general interest in the maintenance of the system of State immunity. In the end, the Court used article 31, paragraph 3 (*c*), to set aside, in this case, the rules of the Convention.[609]

3. Arbitration in the case of a mixed oxide reprocessing plant (MOX Plant) and the OSPAR Convention

439. As noted in chapter I above, this was part of the series of cases brought by Ireland against the United Kingdom concerning the operation of a nuclear reprocessing plant at Sellafield.[610] The award was rendered under the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) in proceedings dealing with access to information concerning the operation of a mixed oxide (MOX) reprocessing plant. Ireland contended that a reference to other rules of international law would affect the construction of the parties' obligations under the Convention in two ways.

440. First, Ireland submitted that the provision in article 9, paragraph 3 (*d*), of the Convention, concerning the right to refuse a request for information if commercial confidentiality is involved, which referred to "applicable international regulations", entailed a reference to

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a failure by Iran to protect an individual could constitute a measure "affecting [the] property rights" of his wife).

[603] *Golder v. the United Kingdom* (see footnote 238 above), pp. 13–14, paras. 27–31.

[604] *Ibid.*, pp. 17–18, para. 35.

[605] *Loizidou v. Turkey*, merits, judgment of 18 December 1996, European Court of Human Rights, *Reports of Judgments and Decisions* 1996-VI, p. 2231, para. 44.

[606] *Ibid*.

[607] *Al-Adsani v. the United Kingdom* (see footnote 219 above), para. 55, *Fogarty v. the United Kingdom* (see footnote 220 above), para. 35, and *McElhinney v. Ireland* (see footnote 219 above), para. 36. The European Court of Human Rights also referred to article 31, paragraph 3 (*c*), in *Banković and Others v. Belgium and Others* (see footnote 221 above), para. 57. For a critique of the Court's approach, see A. Orakhelashvili, "Restrictive interpretation of human rights treaties in the recent jurisprudence of the European Court of Human Rights", EJIL, vol. 14, No. 3 (2003), p. 529.

[608] *Al-Adsani v. the United Kingdom* (see footnote 219 above), paras. 55–56; see also *Fogarty v. the United Kingdom* (footnote 220 above), paras. 35–36, and *McElhinney v. Ireland* (footnote 219 above), paras. 36–37.

[609] The decision did not go unchallenged. The dissenting judges did not claim that State immunity was irrelevant or should be excluded from consideration in what was a "pure article 6 matter". Rather, they found that State immunity should, as a matter of international law, cede precedence to what they saw as a peremptory rule of international law (*jus cogens*) prohibiting torture. *Al-Adsani v. the United Kingdom* (see footnote 219 above), pp. 111–113, joint dissenting opinion of Judges Rozakis and Caflisch, joined by Judges Wildhaber, Costa, Cabral Barreto and Vajić. Other dissenters wished to admit of an exception for torts committed on the territory of the State. *McElhinney v. Ireland* (see footnote 219 above), pp. 51–54, joint dissenting opinion of Judges Caflisch, Cabral Barreto and Vajić.

[610] *Dispute concerning Access to Information under Article 9 of the OSPAR Convention between Ireland and the United Kingdom of Great Britain and Northern Ireland* (see footnote 137 above). The other cases are: *MOX Plant (Ireland v. United Kingdom)*, International Tribunal for the Law of the Sea, provisional measures, order of 3 December 2001 (see footnote 15 above); *MOX Plant (Ireland v. United Kingdom)*, Permanent Court of Arbitration, order No. 3 of 24 June 2003, ILM, vol. 42 (2003), p. 1187.

international law and practice. This, Ireland alleged, included the Rio Declaration[611] and the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. The United Kingdom replied that the Rio Declaration was not a treaty and that the Aarhus Convention had not yet been ratified by either Ireland or the United Kingdom.

441. The Tribunal accepted that it was entitled to draw upon current international law and practice in construing this treaty obligation and in so doing made an express reference to article 31, paragraph 3 (*c*), of the 1969 Vienna Convention. However, it held that neither of the instruments referred to by Ireland were in fact "rules of law applicable between the parties". They were only "evolving international law" that, absent a specific authorization, a tribunal could not apply.[612] One of the arbitrators, Gavan Griffith, dissented on this point.[613] He pointed out that the Aarhus Convention was in force and that it had been signed by both Ireland and the United Kingdom. The latter had publicly stated its intention to ratify the Convention as soon as possible. At the least, this entitled the Tribunal to treat the Convention as evidence of the common views of the two parties on the definition of environmental information.

442. Second, the United Kingdom had submitted that its only obligation under the OSPAR Convention had been discharged by its application of European Community Directive 90/313[614] having to do with the same subject matter. The Tribunal did not, however, consider that following the European Community regulation would have constituted a bar to the procedure under the OSPAR Convention. Both regimes could coexist, even if they were enforcing identical legal obligations.[615] It observed:

> The primary purpose of employing the similar language is to create uniform and consistent legal standards in the field of the protection of the marine environment, and not to create precedence of one set of legal remedies over the other.[616]

4. World Trade Organization

443. As explained in detail in chapter II above, several decisions of the Appellate Body of WTO have considered the application of principles of customary and general international law in the interpretation of agreements covered by WTO. In *United States—Import Prohibition of Certain Shrimp and Shrimp Products* (the "*Shrimp–Turtle* case"), for example, the Appellate Body made extensive reference to international environmental law texts.[617] It found that the terms "natural resources" and "exhaustible" in article XX (*g*) were "by definition evolutionary" and took account, therefore, of article 56 of the United Nations Convention on the Law of the Sea in support of the proposition that natural resources could include both living and non-living resources.[618] The Appellate Body also referred, in support of this construction, to Agenda 21[619] and to the resolution on assistance to developing countries adopted in conjunction with the Convention on the Conservation of Migratory Species of Wild Animals.[620] In so doing, it emphasized that the chapeau of article XX was "but one expression of the principle of good faith", which it found to be a "general principle of international law".[621] "[O]ur task here," said the Tribunal, expressly relying on article 31, paragraph 3 (*c*), "is to interpret the language of the chapeau, seeking additional interpretative guidance, as appropriate, from the general principles of international law."[622] In deciding the question of whether sea turtles were "exhaustible", the Appellate Body referred to the fact that all seven of the recognized species of sea turtle were listed in appendix 1 to the Convention on International Trade in Endangered Species of Wild Fauna and Flora.[623]

444. The relations between the treaties covered by WTO and multilateral environmental agreements and human rights instruments are now the subject of a growing body of scholarly literature.[624] The WTO Appellate Body has always accepted that the requirement in article 3, paragraph 2, of the Understanding on Rules and Procedures Governing the Settlement of Disputes that panels apply "customary rules of interpretation of public international law" requires rigorous application of articles 31 and 32 of the 1969 Vienna Convention to the issues before them. It has not hesitated to reverse panel decisions on the ground

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[611] *Report of the United Nations Conference on Environment and Development…* (see footnote 177 above).

[612] *Dispute concerning Access to Information under Article 9 of the OSPAR Convention between Ireland and the United Kingdom of Great Britain and Northern Ireland* (see footnote 137 above), UNRIAA, vol. XXIII, pp. 90–92, paras. 99, 101–105; ILR, vol. 126, pp. 367–369.

[613] *Dispute concerning Access to Information under Article 9 of the OSPAR Convention between Ireland and the United Kingdom of Great Britain and Northern Ireland* (see footnote 137 above), UNRIAA, vol. XXIII, pp. 119–126; ILR, vol. 126, pp. 397–405.

[614] Council Directive 90/313/EEC, of 7 June 1990, on the freedom of access to information on the environment, *Official Journal of the European Communities*, L 158, 23 June 1990, p. 56.

[615] The President of the Tribunal, Professor Michael Reisman, dissented on this issue: *Dispute concerning Access to Information under Article 9 of the OSPAR Convention between Ireland and the United Kingdom of Great Britain and Northern Ireland* (see footnote 137 above), UNRIAA, vol. XXIII, pp. 113–118; ILR, vol. 126, pp. 391–397.

[616] *Dispute concerning Access to Information under Article 9 of the OSPAR Convention between Ireland and the United Kingdom of Great Britain and Northern Ireland* (see footnote 137 above), UNRIAA, vol. XXIII, p. 100, para. 143; ILR, vol. 126, p. 378.

[617] *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report (see footnote 223 above), paras. 126–134.

[618] *Ibid.*, para. 130, citing the 1971 advisory opinion of the International Court of Justice concerning *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)* (see footnote 491 above), p. 31. The Tribunal noted that, although the complainant States had ratified the United Nations Convention on the Law of the Sea, the United States had not done so but had accepted, during the course of the hearing, that the fisheries law provisions of that Convention for the most part reflected international customary law.

[619] *Report of the United Nations Conference on Environment and Development…* (see footnote 177 above).

[620] Final Act of the Conference to Conclude a Convention on the Conservation of Migratory Species of Wild Animals, ILM, vol. 19, No. 1 (January 1980), p. 11, at p. 15.

[621] *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report (see footnote 223 above), para. 158.

[622] *Ibid.*

[623] *Ibid.*, para. 25.

[624] See, for example, Pauwelyn, "The role of public international law in the WTO…" (footnote 43 above), p. 535; Marceau, "WTO dispute settlement and human rights" (footnote 43 above); Lowenfeld (footnote 247 above), pp. 314–339; and Pauwelyn, *Conflict of Norms…* (footnote 21 above).

that they have failed to do so.[625] In carrying out its interpretative function it has made extensive reference to other rules of international law, but it has never found that those other rules would have overridden anything under agreements covered by WTO—although they have influenced the interpretation and application of those agreements.

445. For example, WTO bodies have frequently taken account of regional and bilateral trade agreements. In the *United States—FSC (Article 21.5—EC)* case (2002), the Appellate Body referred to a wide range of regional and bilateral trade agreements and found that they shared what it chose to call a "widely accepted common element" in their definition of the term "foreign-source income", which it then used to interpret that expression in the context of the Subsidies and Countervailing Measures Agreement.[626] In *EC—Poultry* (1998), the Appellate Body explained its recourse to the 1994 Oilseeds Agreement as a "*supplementary means* of interpretation [of the relevant WTO commitment] pursuant to article 32 of the *Vienna Convention*, as it is part of the historical background of the concessions of the European Communities…"[627] In the *Korea—Various Measures on Beef* case (2001), the Panel likewise made reference to various bilateral trade agreements entered into by Korea, "not with a view to 'enforcing' the content of these bilateral agreements, but strictly for the purpose of interpreting an ambiguous WTO provision".[628] It may be argued that these agreements have been used only as a "supplementary means of interpretation" and not by virtue of article 31, paragraph 3 (*c*).[629] Such recourse has often been rationalized as providing evidence of the intent of the parties or of the "ordinary meaning" of the treaty words.

446. Yet there is no reason not to seek the legal basis for "taking account" of such extraneous agreements precisely in that article, especially when such "taking account" reaches beyond a mere footnote reference. This would appear to be reasonable in cases such as the *Chile—Price Band System* case (2002), for example, where the Panel both interpreted and *applied* Economic Complementarity Agreement No. 35 between Chile and the Southern Common Market (MERCOSUR) in a way that excluded its consideration in the case in question. The Panel referred to the preamble and article 24 of that instrument (referred to as ECA 35), noting that it suggested that the parties (Chile and MERCOSUR) had not intended to exclude the possibility that different rules might be applicable in other international agreements, *i.e.* WTO agreements. The Panel, in other words, applied a non-WTO treaty in order to operate a *renvoi*, by interpreting it so as to allow a treatment in the WTO context that would not have been allowed under the treaty itself (thereby creating the presumption that, had ECA 35 not been interpreted in such a way, the WTO standard would have been inapplicable).[630]

447. One sometimes hears the claim that this might not even be permissible in view of the express prohibition in the Understanding on Rules and Procedures for the Settlement of Disputes according to which the "[r]ecommendations and rulings of the [Dispute Settlement Body] cannot add to or diminish the rights and obligations provided in the covered agreements" (art. 3, para. 2 *in fine*). Such a view would, however, presume that the agreements covered are "clinically isolated" in precisely the way the Appellate Body has denied. Two considerations are relevant here. First, when article 31, paragraph 3 (*c*), of the 1969 Vienna Convention is used, it is used with the specific authorization of the Understanding itself. But second, and more important, interpretation does not "add" anything to the instrument that is being interpreted. It constructs the meaning of the instrument by means of a legal technique (a technique specifically approved by the Understanding) that involves taking account of its normative environment. Here it appears immaterial whether recourse to other agreements is had under article 31, paragraph 3 (*c*), as supplementary means of interpretation or as evidence of party intent or of ordinary meaning or good faith (the presumption that States do not enter into agreements with the intention of breaching their obligations). The rationale remains that of seeing States, when acting within the WTO system, as identical with themselves as they act in other institutional and normative contexts. Interpretation *does not add or diminish rights or obligations* that would exist in some lawyers' heaven where they could be ascertained "automatically" and independently of interpretation. All instruments receive meaning through interpretation—even the conclusion that a meaning is "ordinary" is an effect of interpretation that cannot have *a priori* precedence over other interpretations.

448. Finally, significant, though limited, use of article 31, paragraph 3 (*c*), was made by a WTO Panel in the recent *European Communities—Measures Affecting the Approval and Marketing of Biotech Products* case (2006). Here the European Community had argued that its ban on the importation of genetically modified organisms could be justified, *inter alia*, by certain non-WTO rules. It had argued, in particular, that account should be taken of the 1992 Convention on Biological Diversity and the related Cartagena Protocol on Biosafety of 2000. Having first determined that the two instruments indeed established "rules of international law", the Panel then considered whether they were also "applicable in the

[625] *United States—Standards for Reformulated and Conventional Gasoline*, WTO Appellate Body report (see footnote 48 above), pp. 15–17.

[626] *United States—Tax Treatment for "Foreign Sales Corporations"—Recourse to Article 21.5 of the DSU by the European Communities*, WTO Appellate Body report, WT/DS108/AB/RW, adopted 29 January 2002, paras. 141–145 (especially footnote 123).

[627] *European Communities—Measures Affecting the Importation of Certain Poultry Products*, WTO Appellate Body report, WT/DS69/AB/R, adopted 23 July 1998, para. 83 and generally paras. 77–85. For the Agreement in the form of Agreed Minutes on certain oil seeds between the European Community and Brazil pursuant to Article XXVIII of the General Agreement on Tariffs and Trade, see *Official Journal of the European Communities*, L 47, 18 February 1994, p. 8.

[628] *Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WTO Panel report, WT/DS161/R, WT/DS169/R, adopted 10 January 2001, as modified by Appellate Body report WT/DS161/AB/R, WT/DS169/AB/R, para. 539.

[629] Van Damme (footnote 427 above), p. 569.

[630] *Chile—Price Band System and Safeguard Measures Relating to Certain Agricultural Products*, WTO Panel report, WT/DS207/R, adopted 23 October 2002, as modified by Appellate Body report, WT/DS207/AB/R, paras. 7.81–7.86. For Economic Complementarity Agreement No. 35 between Chile and MERCOSUR, signed at San Luis (Argentina) on 25 June 1996, see Chile, *Official Gazette*, 4 October 1996. Likewise in *European Communities—Regime for the Importation, Sale and Distribution of Bananas*, WTO Appellate Body report, WT/DS27/AB/R, adopted 25 September 1997, para. 167.

relations between the parties". It found the expression "party" there to mean "a State which has consented to be bound by the treaty and for which the treaty is in force".[631] It dismissed the view that the reference to "parties" in article 31, paragraph 3 (*c*), would have meant (merely) parties to a dispute. All the parties to a treaty to be interpreted needed to have become parties to the other treaty. The Panel, in other words, read the WTO treaty in a *non-bilateral* way so as to "ensure[ ] or enhance[ ] the consistency of the rules of international law applicable to these States and thus contribute[ ] to avoiding conflicts between the relevant rules".[632] Because the United States had not become a party to either one of these treaties (although it had signed the Convention on Biological Diversity), they could not be "taken into account".

449. The Panel also considered the argument made by the European Community that the precautionary principle might, since 1998 when the argument had been made in the *EC Measures Concerning Meat and Meat Products (Hormones)* case, have been established as a general principle of international law (the Panel's language here is slightly unclear, however, occasional reference being made to "general principles of law"). The Panel agreed that, were this to be the case, then it would become relevant under article 31, paragraph 3 (*c*). It found, however, though in a somewhat obscure way, both that "the legal status of the precautionary principle remains unsettled" and that it "need not take a position on whether or not the precautionary principle is a recognized principle of general or customary international law".[633]

450. Two aspects of this case are important. First, the Panel accepted that article 31, paragraph 3 (*c*), applied to general international law and other treaties. Second, it interpreted article 31, paragraph 3 (*c*), so that the treaty to be taken account of must be one to which all parties to the relevant WTO treaty are parties. This latter contention makes it practically impossible ever to find a multilateral context where reference to other multilateral treaties as aids to interpretation under article 31, paragraph 3 (*c*), would be allowed. The Panel buys what it calls the "consistency" of its interpretation of the WTO treaty at the cost of the consistency of the multilateral treaty system as a whole. It aims to mitigate this consequence by accepting that other treaties may nevertheless be taken into account as facts elucidating the ordinary meaning of certain terms in the relevant WTO treaty. This is, of course, always possible and, as pointed out above, has been done in the past as well. However, taking "other treaties" into account as evidence of "ordinary meaning" appears a rather contrived way of preventing the "clinical isolation" emphasized by the Appellate Body.

5. International Court of Justice

451. Very significant use of article 31, paragraph (3) (*c*), was made by the International Court of Justice in the *Oil Platforms* case.[634] Here the Court was called upon to interpret two provisions of the 1955 Treaty of Amity, Economic Relations, and Consular Rights between the United States and Iran. It was requested to determine whether actions by Iran that were alleged to imperil neutral commercial shipping in the Iran–Iraq war, and the subsequent destruction by the United States Navy of three Iranian oil platforms in the Persian Gulf, were breaches of the Treaty. The Court's jurisdiction was limited to disputes arising as to the interpretation or application of the Treaty. It had no other basis for jurisdiction that might have provided an independent ground for the application of customary international law.[635] One of the operative provisions of the Treaty stipulated that:

> The present Treaty shall not preclude the application of measures:
>
> …
>
> (*d*) necessary to fulfill the obligations of a High Contracting Party for the maintenance or restoration of international peace and security, or necessary to protect its essential security interests.[636]

452. According to the United States, this provision was intended simply to exclude all such measures from the scope of the Treaty. It should be interpreted in accordance with its ordinary meaning, leaving a wide margin of appreciation for each State to determine its essential security interests.[637] It submitted that there was no place to read into the Treaty rules derived from customary international law on the use of force (as Iran had argued) and that to do so would violate the limits on the Court's jurisdiction.

453. The Court approached the question of interpretation rather differently. It first asked whether such necessary measures could include the use of armed force and, if so, whether the conditions under which such force could be used under international law (including any conditions of legitimate self-defence) applied.[638] Having referred to other aids to interpretation, the Court then reasoned:

> Moreover, under the general rules of treaty interpretation, as reflected in the 1969 Vienna Convention on the Law of Treaties, interpretation must take into account "any relevant rules of international law applicable in the relations between the parties" (Art. 31, para. 3 (*c*)). The Court cannot accept that Article XX, paragraph 1 (*d*), of the 1955 Treaty was intended to operate wholly independently of the relevant rules of international law on the use of force, so as to be capable of being successfully invoked, even in the limited context of a claim for breach of the Treaty, in relation to an unlawful use of force. The application of the relevant rules of international law relating to this question thus forms an integral part of the task of interpretation entrusted to the Court by … the 1955 Treaty.[639]

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[631] *European Communities—Measures Affecting the Approval and Marketing of Biotech Products* (see footnote 582 above), para. 7.68.

[632] *Ibid.*, para. 7.70.

[633] *Ibid.*, para. 7.89.

[634] *Oil Platforms (Islamic Republic of Iran v. United States of America)* (see footnote 128 above), p. 182, para. 41.

[635] Cf. the position in *Military and Paramilitary Activities in and against Nicaragua*, Merits, Judgment of 27 June 1986 (footnote 51 above), in which the Court was asked to interpret very similar treaty language but also had an additional basis for its jurisdiction as a result of unilateral declarations made by both parties under Article 36, paragraph 2, of its Statute.

[636] Treaty of Amity, Economic Relations, and Consular Rights (see footnote 94 above), art. XX, para. 1 (*d*); see also *Oil Platforms (Islamic Republic of Iran v. United States of America)* (footnote 128 above), pp. 178–179, para. 32.

[637] *Oil Platforms (Islamic Republic of Iran v. United States of America)*, rejoinder of the United States, 23 March 2001, part IV, pp. 132–133, available from www.icj-cij.org/en/case/90/written-proceedings.

[638] *Oil Platforms (Islamic Republic of Iran v. United States of America)* (see footnote 128 above), pp. 181–182, para. 40.

[639] *Ibid.*, p. 182, para. 41.

454. The Court then proceeded to apply those general rules of international law to the conduct of the United States. It concluded that the measures could not be justified as necessary under the Treaty "since those actions constituted recourse to armed force not qualifying, under international law on the question, as acts of self-defence, and thus did not fall within the category of measures contemplated, upon its correct interpretation, by that provision of the Treaty".[640]

455. The Court's judgment on the merits was supported by a large majority of the judges. Different views on the question of the proper approach to interpretation were, however, expressed in separate opinions.[641] The narrowest view on article 31, paragraph 3 (*c*), was taken by Judge Buergenthal, according to whom the Court's jurisdiction was limited to only those matters which the parties had agreed to entrust to it; he opined that this also limited the extent to which the Court could refer to other sources of law in interpreting the treaty before it. In his view, this limitation excluded reliance on other rules of international law, whether customary or conventional, even if found in the Charter of the United Nations.[642] This would in practice nullify the meaning of article 31, paragraph 3 (*c*), and go against wide international judicial and arbitral practice. Moreover, it would suggest arbitrarily that a treaty's meaning to its parties is independent of the normative environment in which the parties have agreed to conclude it.

456. The opposite position was taken by Judge Simma, who considered that the Court might have taken the opportunity to declare the customary international law on the use of force and the importance of the Charter of the United Nations even more firmly than it had.[643] Following a position earlier taken by Lauterpacht and others, he advocated a wide use of general international law and other treaty rules applicable to the parties and held that this could be justified under article 31, paragraph 3 (*c*).[644] Judge Higgins was much more critical of the Court's use of article 31, paragraph 3 (*c*).[645] She pointed to the need to interpret article XX, paragraph 1 (*d*), in accordance with the ordinary meaning of its terms and in its context, as part of an economic treaty. She considered that the provision was not one that "on the face of it envisages incorporating the entire substance of international law on a topic not mentioned in the clause—at least not without more explanation than the Court provides".[646]

457. The position of Judge Kooijmans was situated somewhere in the middle. He suggested that the Court should have begun with an analysis of the text of the 1955 Treaty itself. But in order to determine whether a particular measure involving the use of force was "necessary" under that Treaty, the Court had "no choice but to rely for this purpose on the body of general international law".[647] Even as the Court had no jurisdiction under the Charter, recourse to the concept of self-defence under "general international law" could not be avoided in order to give a meaning to the treaty over which it did have jurisdiction.[648] This is, in fact, to say no more than what has been affirmed throughout this report: general international law provides the background for all application of special law. At the same time, a large number of rules about statehood, maritime passage, representation and responsibility underlay the *Oil Platforms* case and were unproblematically presumed to be applicable by all parties.

458. The *Oil Platforms* case represents a bold application of article 31, paragraph 3 (*c*), by the International Court of Justice in order to move from a technical treaty provision to what it saw as the real heart of the matter—the use of force.[649] The Court imports into its treaty analysis a substantial body of general international law, including the Charter of the United Nations. The conduct of the State in question was then assessed by reference to the position under general international law, which in turn was applied to assess its position under the treaty. For the first time, the Court acknowledged the pivotal role of article 31, paragraph 3 (*c*), in this process, but it did not give further guidance as to when and how it should be applied.

459. Recourse by the Court to article 31, paragraph 3 (*c*), of the 1969 Vienna Convention inasmuch as it was to *general international law* may in fact have been unnecessary. The treaty provision at issue contained the open-ended term "necessary", which required interpretation. Absent the possibility of using a documented party intent to elucidate it, the Court could simply have turned to what "general international law" said on the content of that standard. The rationale for this was stated by the Court in the *North Sea Continental Shelf* cases (1969). General customary law,

> by [its] very nature, must have equal force for all members of the international community, and cannot therefore be the subject of any right of unilateral exclusion…[650]

460. To assume that a tribunal may not be entitled to apply general international law in the interpretation of a treaty is to hold that, once States conclude a bilateral treaty, they create a vacuum that consists precisely of this type of exclusion. As we saw in chapter II above, no support may be found from international practice for such a contention. On the contrary, an enormous amount of material supports the applicability of general international law in order to interpret any particular legal relationship, whether also addressed by a bilateral treaty, a local custom or a series of informal exchanges amounting to binding rules through acquiescence or estoppel.

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[640] *Ibid.*, p. 199, para. 78.

[641] The Court entered judgment, declining by 14 votes to 2 to uphold Iran's claim (Judges Al-Khasawneh and Elaraby dissenting) and declining by 15 votes to 1 to uphold the United States' counterclaim (Judge Simma dissenting).

[642] *Oil Platforms (Iran v. United States of America)* (see footnote 128 above), pp. 278–279 (separate opinion of Judge Buergenthal), paras. 22–23.

[643] *Ibid.*, pp. 326–334 (separate opinion of Judge Simma), paras. 5–16.

[644] *Ibid.*, pp. 329–330, para. 9.

[645] *Ibid.*, pp. 236–240 (separate opinion of Judge Higgins), paras. 40–54.

[646] *Ibid.*, p. 237, para. 46.

[647] *Ibid.*, p. 261 (separate opinion of Judge Kooijmans), para. 48.

[648] *Ibid.*, p. 262, para. 52.

[649] As highlighted in Jouannet (see footnote 126 above). The case has inspired varied reactions. For those who celebrate the Court's bold view of article 31, paragraph 3 (*c*), see P.-M. Dupuy, *Droit international public*, 7th ed., Paris, Dalloz, 2004, pp. 314–315.

[650] *North Sea Continental Shelf* (see footnote 95 above), p. 38, para. 63.

D. Special questions

461. Three special questions relate to the application of article 31, paragraph 3 (*c*). One concerns the extent of the reference therein. What are the "rules of international law applicable in the relations between the parties" to which the provision refers? The second problem concerns the normative weight of the reference. What does it mean that those rules "shall be taken into account, together with the context"? The third is the question of inter-temporality: what is critical for the rules to be taken into account—the date of the conclusion of a treaty or the law in force at the moment of its application?

1. The rules to be "taken into account"

462. That international tribunals have, until recently, rarely made any specific use of article 31, paragraph 3 (*c*), is not to say that they would not have referred to law external to the treaty to be applied. By their very nature, customary law and general principles of law (and general principles of *international* law) exist as *lex generalis* in relation to any particular agreement. They are fully applicable and often applied alongside particular treaties. Reference to article 31, paragraph 3 (*c*), has normally concerned the possibility and extent of recourse to rules that exist at the same level of generality and binding force as the treaty to be interpreted (usually other treaties), but where they might seem to conflict with it or put forward considerations that otherwise seem unorthodox in the context.

(a) *Customary law and general principles*

463. As explained in chapter II above, although there is no official hierarchy between the sources of international law, there is, nonetheless, an informal hierarchy that results from the procedure through which lawyers approach applicable law, proceeding from the *lex specialis* to the *lex generalis*, or from the more specific to the more general—that is to say, usually from the treaty text to customary law and general principles of law. Max Huber once put this illuminatingly in terms of a progression of legal reasoning through concentric circles, each one constituting a field of reference of potential assistance in treaty interpretation:

> *Il faut donc chercher la volonté des parties dans le texte conventionnel, d'abord dans les clauses relatives à la contestation, ensuite dans l'ensemble de la convention, ensuite dans le droit international général, et enfin dans les principes généraux de droit reconnus par les nations civilisées. C'est par cet encirclement concentrique que le juge arrivera dans beaucoup de cas à établir la volonté presumptive des parties "conformément aux exigences fondamentales de la plénitude du droit et de la justice internationale", ainsi que le rapporteur formule admirablement la tâche du juge.*[651]

464. Article 31, paragraph 3 (*c*), is only part of the larger interpretation process, in which the interpreter must first consider the plain meaning of the words in a treaty, if any, proceeding therefrom to the context and to considerations relating to object and purpose, subsequent practice and, eventually, *travaux préparatoires*. This is not meant as an actual description of a psychological process. The practice of interpretation cannot be captured in such neatly rational terms.[652] As Waldock himself noted, in characteristically careful fashion: "the interpretation of documents is to some extent an art, not an exact science".[653] But it is an apt account of competent public reasoning by lawyers and tribunals. In the *Oil Platforms* case, for example, the Court started with an analysis of the text of article XX, paragraph 1 (*d*), of the 1955 Treaty of Amity and proceeded from there to the intention of the parties, which, again, pointed to the need to consider the state of the general law on the use of force. The starting point is the treaty itself, with interpretation proceeding from the more concrete and obvious (dictionary, context) to the less tangible and less obvious (object and purpose, analogous treaties, *etc*.) in order to give the text a justifiable meaning.

465. To examine the interpretative process not as a psychological (thought) process but as an exercise in competent legal argument inevitably portrays it as an effort at "systemic integration", *i.e.* integration within the system of principles and presumptions that underlie the idea of an inter-State legal order and provide its argumentative materials. Among them, mention should be made of two presumptions, one positive, the other negative:

(*a*) According to the *positive presumption*, parties are taken to refer to general principles of international law for all questions which the treaty does not itself resolve in express terms or in a different way;[654]

(*b*) According to the *negative presumption*, in entering into treaty obligations, the parties intend not to act inconsistently with generally recognized principles of international law or with previous treaty obligations towards third States.[655]

466. In accordance with these presumptions, an especially significant role for customary international law and general principles of law opens up. As a WTO Panel recently put it:

> the relationship of the WTO Agreements to customary international law is broader than [the reference in article 3, paragraph 2, concerning customary rules of interpretation]. Customary international law applies generally to the economic relations between the WTO [m]embers. Such international law applies to the extent that the WTO treaty agreements do not "contract out" from it. To put it another way, to the extent there is no conflict or inconsistency, or an expression in a covered WTO agreement that implies differently, we are of the view that the customary

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[651] "The will of the parties must therefore be sought in the text of the treaty, first in the dispute provisions, then in the treaty as a whole, then in general international law, and lastly in the general principles of law recognized by civilized nations. It is by progressing through these concentric circles that a judge will, in many cases, be able to determine the presumed will of the parties 'in accordance with the fundamental requirements of international law and justice as a whole', as the rapporteur admirably describes the judge's task": *Annuaire de l'Institut de droit international*, vol. 44-I (Session of Sienna), pp. 200–201.

[652] One of the best analyses of the interpretative process in an international law context remains M. Sørensen, *Les sources du droit international: Étude sur la jurisprudence de la Cour permanente de justice internationale*, Copenhagen, Munksgaard, 1946, especially pp. 210–236.

[653] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (see footnote 323 above), p. 54, para. (6) of the commentary to draft article 73.

[654] *Georges Pinson (France) v. United Mexican States* (see footnote 244 above), p. 422.

[655] *Case concerning right of passage over Indian territory*, Preliminary Objections, Judgment of 26 November 1957 (see footnote 38 above), p. 142; Jennings and Watts (eds.), *Oppenheim's International Law* (see footnote 37 above), p. 1275.

rules of international law apply to the WTO treaties and to the process of treaty formation under the WTO.[656]

467. Most of the cases considered above have involved the assertion and application of principles of customary international law. This has typically been done where a treaty rule is unclear or open-textured and its meaning is determined by reference to a developed body of international law (as in the issue of dual nationality dealt with by the Iran–United States Claims Tribunal in *Esphahanian v. Bank Tejarat* or in the construction of article XX of GATT discussed in connection with the *Shrimp–Turtle case*), or where the terms used in the treaty have a recognized meaning in customary international law, to which the parties can therefore be taken to have intended to refer. This was found to be the case, for example, in the construction of the terms "fair and equitable treatment" and "full protection and security", interpreted by the North American Free Trade Agreement Free Trade Commission in *Pope and Talbot Inc. v. Canada*.[657]

468. Here it is really immaterial whether or not a tribunal expressly chooses to invoke article 31, paragraph 3 (*c*). These general rules and principles are applicable as a function of their mere "generality", and their validity is based on nothing grander than their having passed what Thomas Franck calls the "'but of course' test"—a more or less unstable "common sense of the interpretative community (governments, judges, scholars)".[658] No special reference was needed by the Permanent Court of International Justice, for example, when in the *Chorzów Factory* case it made the point that

> it is a principle of international law, and even a general conception of law, that any breach of an engagement involves an obligation to make reparation.[659]

469. The same concerns many principles identified by the International Court of Justice, such as freedom of maritime communication,[660] "good faith",[661] "estoppel",[662] *ex injuria jus non oritur*[663] and so on. Further examples include the criteria for statehood (*Loizidou*); the law of State responsibility (which has influenced both the reach of human rights obligations[664] and the law of economic counter-measures in WTO); the law of State immunity; the use of force; and the principle of good faith.[665] The general principles of law recognized by civilized nations perform a rather similar task in locating a treaty provision within a principled framework (as was done in determining the scope of the fair trial right in *Golder*). Pauwelyn lists among procedural principles regularly used by the Appellate Body of WTO those of "burden of proof, standing (*jus standi*), due process, good faith, representation before panels, the retroactive force of treaties or error in treaty formation".[666] These are not "enacted" by positive acts of States (although they may well be traceable back to State will) but are parts of the general framework of international law, or—which amounts to the same—aspects of the legal craft of justifying decisions in legal disputes.[667]

(b) *Other applicable conventional international law*

470. As pointed out above, article 31, paragraph 3 (*c*), goes beyond the truism that "general international law" is applied generally to foresee the eventuality that another rule of *conventional* international law is applicable in the relations between the parties. The main problem is this: is it necessary that *all* the parties to the treaty being interpreted are also parties to the treaty relied upon as the other source of international law for interpretation purposes?

471. The problem is particularly acute where the treaty under interpretation is a multilateral treaty of very general acceptance (such as agreements covered by WTO). As we saw, the Panel in *European Communities—Measures Affecting the Approval and Marketing of Biotech Products* concluded that only agreements to which *all* WTO members were parties could be taken into account under article 31, paragraph 3 (*c*), in the interpretation of WTO agreements.[668] Bearing in mind the unlikeliness of a precise congruence in the membership of most important multilateral conventions, it would become unlikely that *any* use of conventional international law could be made in the interpretation of such conventions. This would have the ironic effect that the more the membership of a multilateral treaty, such as the agreements covered by WTO, expanded, the more those treaties would be cut off from the rest of international law.[669] In practice, the result would be the isolation of multilateral agreements as "islands" permitting no references *inter se* in their application. It would also prohibit any use of regional or other particular implementation agreements—including *inter se* agreements—that may have been concluded under a framework treaty as interpretative aids to the latter. This would seem contrary to the legislative ethos behind most multilateral treaty-making and, presumably, the intent of most treaty-makers. Of course, some of this might be mitigated by requiring a finding that, if a treaty is not in force

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[656] *Korea—Measures Affecting Government Procurement* (see footnote 44 above), para. 7.96.

[657] *Pope and Talbot Inc. v. Government of Canada,* decision of 31 May 2002, *ICSID Reports*, vol. 7 (2005), p. 148, citing the interpretation of the Free Trade Commission; see also ILM, vol. 41, No. 6 (November 2002), p. 1347.

[658] T. M. Franck, "Non-treaty law-making: when, where and how?", in Wolfrum Röben (eds.), *Developments of International Law in Treaty Making* (see footnote 11 above), p. 417, at p. 423.

[659] *Factory at Chorzów*, Merits, Judgment, 13 September 1928, *P.C.I.J., Series A*, No. 17, p. 29.

[660] *Corfu Channel* (see footnote 449 above), p. 22.

[661] *Nuclear Tests* (see footnote 555 above), p. 268, para. 46.

[662] *Case concerning the Temple of Preah Vihear* (see footnote 135 above), pp. 31–32.

[663] *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)* (see footnote 491 above).

[664] See, for example, *Loizidou v. Turkey*, preliminary objections, 23 March 1995 (footnote 56 above), pp. 22–24, paras. 57–64. See also the reliance on the public international law rules of jurisdiction in *Banković and Others v. Belgium and Others* (footnote 221 above), pp. 351–352, paras. 59–60.

[665] Pauwelyn, *Conflict of Norms…* (see footnote 21 above), pp. 270–271.

[666] J. Pauwelyn, "The World Trade Organization", in Huesa Vinaixa and Wellens (eds.) (see footnote 14 above), p. 211, at pp. 225–226 and footnotes.

[667] See further Koskenniemi, "General principles: reflexions on constructivist thinking in international law" (footnote 24 above).

[668] *European Communities—Measures Affecting the Approval and Marketing of Biotech Products* (see footnote 582 above), paras. 7.68–7.70.

[669] Marceau, "WTO dispute settlement and human rights" (see footnote 43 above), p. 781.

between all members to the treaty under interpretation, a rule contained in it be treated as customary international law.[670] This approach would maintain the "generality" of at least some multilateral treaties. But it would have an inappropriately restrictive effect in two situations:

(*a*) It could preclude reference to treaties that have very wide acceptance within the international community (including by the disputing States) but which are nevertheless not universally ratified and are not accepted in all respects as stating customary international law (such as the United Nations Convention on the Law of the Sea);

(*b*) It could also preclude reference to treaties which represent the most important elaboration of the content of international law on specialist subject matter, on the basis that they have not been ratified by all parties to the treaty under interpretation.

472. A better solution is to permit reference to another treaty provided that the *parties in dispute* are also parties to that other treaty. Although this creates the possibility of divergent interpretations arising (depending on which States parties are also parties to the dispute), it would simply reflect the need to respect (inherently divergent) party will, as elucidated by reference to those other treaties, as well as the bilateralist character of most treaties underpinned by practices regarding reservations, *inter se* modification and successive treaties, for example.[671] The risk of divergence—a commonplace in treaty law—would be mitigated by making the distinction between "reciprocal" or "synallagmatic" treaties (in which case mere "divergence" in interpretation creates no problem) and "integral" or "interdependent" treaties (or treaties concluded *erga omnes partes*), where the use of another treaty in interpretation should not be allowed to threaten the coherence of the treaty to be interpreted.[672] This would also respond to the precise concern of the WTO Panel in *European Communities—Measures Affecting the Approval and Marketing of Biotech Products* about consistency in treaty interpretation.[673] In addition, it might also be useful to take into account the extent to which the other treaty relied upon can be said to have been "implicitly" accepted, or at least tolerated, by the other parties "in the sense that the rule can reasonably be said to express the common intentions or understanding of all members as to what the … term means".[674] This approach has in fact been adopted in some decisions of the WTO Appellate Body.[675] It gives effect to the sense in which certain multilateral treaty notions or concepts, though perhaps not found in treaties with identical membership, are nevertheless adopted widely enough to give a good sense of a "common understanding" or the "state of the art" in a particular technical field, without necessarily reflecting formal customary law.

2. The weight of the obligations to be taken into account

473. The above considerations have also answered the question of the *weight* to be given to the law—the rights and obligations—to be taken account of under article 31, paragraph 3 (*c*). The importance of those rights and obligations does not reside in their overriding character. As we have seen, international law reserves this function for *jus cogens*. An approach that gave excessive weight to the normative environment over particular treaties would—like a generalized presumption about the precedence of *lex generalis* over *lex specialis*—stifle treaty-making: the need to react to new circumstances and to give effect to interests or needs that, for one reason or another, have been underrepresented in traditional law. Rather, the significance of the need to "take into account" lies in its performance of a systemic function in the international legal order, linking specialized parts to each other and to universal principles.[676]

474. The question of the normative weight to be given to particular rights and obligations at the moment when they appear to clash with other rights and obligations can only be argued on a case-by-case basis. There is little to be added in this regard to what Judges Higgins, Buergenthal and Kooijmans observed in considering the balance to be struck between the conflicting dictates of the rule of State immunity, on the one hand, and liability for international crimes, on the other:

> International law seeks the accommodation of this value [the prevention of unwarranted outside interference in the domestic affairs of States] with the fight against impunity, and not the triumph of one norm over another.[677]

3. Inter-temporality and general developments in international law

475. The third general issue—and the one that raised most discussion in the Commission itself—is the question of inter-temporal law, or, in other words, the question of what should be the right moment in time (critical date) for the assessment of the rules that should be "taken into account" under article 31, paragraph 3 (*c*). The traditional rule,[678] and the one proposed to the Commission by Wal-

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[670] See, for example, the emphasis placed in the *Shrimp–Turtle* case on the fact that, although the United States had not ratified the United Nations Convention on the Law of the Sea, it had accepted during the course of the argument that the relevant provisions for the most part reflected international customary law (*United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report (see footnote 223 above), para. 171, note 174).

[671] It cannot be emphasized too much that this risk of "divergence" is no greater than in *any* interpretation of a multilateral treaty by reference to party will.

[672] For a recent exploration of this idea in the context of agreements covered by WTO, see Pauwelyn, *Conflict of Norms…* (footnote 21 above), pp. 440–486, and J. Pauwelyn, "A typology of multilateral treaty obligations: are WTO obligations bilateral or collective in nature?", EJIL, vol. 14, No. 5 (2003), p. 907.

[673] *European Communities—Measures Affecting the Approval and Marketing of Biotech Products* (see footnote 582 above), para. 7.70.

[674] Pauwelyn supports this approach in the case of agreements covered by WTO (Pauwelyn, *Conflict of Norms…* (see footnote 21 above), pp. 257–263, especially p. 261).

[675] See, for example, the sources relied upon by the Appellate Body in *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report (footnote 223 above), para. 130.

[676] For an early elaboration, see especially H. Lauterpacht, *Private Law Sources and Analogies of International Law,* London, Longman, 1927 (highlighting the role of principles of private law in the construction of international legal relationships).

[677] *Arrest Warrant of 11 April 2000* (see footnote 531 above), pp. 86–87 (joint separate opinion of Judges Higgins, Kooijmans and Buergenthal), para. 79.

[678] That rule was stated by Judge Huber in the context of territorial claims, and its two parts are as follows: "a juridical fact must be

dock, consisted of two parts: one affirming "contemporaneity", the other allowing changes in the law to be taken into account. According to the former aspect, a treaty was to be interpreted "in the light of the law in force at the time when the treaty was drawn up".[679] The latter aspect required, however, that "the application of a treaty … be governed by the rules of international law in force at the time when the treaty is applied".[680]

476. The rationale of the two parts of the principle is clear, and difficult to contest. On the one hand, when States create a legal relationship, they undoubtedly do this bearing in mind the normative environment as it exists at the moment when the relationship is formed. Or, in other words, deference to the law in force at the time when a treaty is concluded best takes account of the intent of the parties. Nevertheless, no legal relationship can remain unaffected by time. This is already confirmed by the need to take into account the subsequent practice of the parties. In a similar way, the views of the parties about the meaning and application of the treaty develop in accordance with the passing of time, the accumulation of experience, and new information and novel circumstances.

477. The doctrine of inter-temporal law is essentially a reminder of these two rationales, one pointing to the past as a guide for finding party intent, the other pointing to the present for exactly the same reason. As pointed out by Jiménez de Aréchaga in the Commission in 1964:

> The intention of the parties should be controlling, and there seemed to be two possibilities so far as that intention was concerned: either they had meant to incorporate in the treaty some legal concepts that would remain unchanged, or, if they had had no such intention, the legal concepts might be subject to change and would then have to be interpreted not only in the context of the instrument, but also within the framework of the entire legal order to which they belonged. The free operation of the will of the parties should not be prevented by crystallizing every concept as it had been at the time when the treaty was drawn up…[681]

478. Because it seems pointless to try to set any general and abstract preference between the past and the present,[682] it is best, once again, to merely single out some considerations that may be relevant when deciding whether to apply article 31, paragraph 3 (*c*), so as to "take account" of the "other obligations" as they existed when the treaty was concluded or as they exist when it is being applied. The starting point must be, again, the fact that deciding this issue is a matter of interpreting the treaty itself. Does the language used give any indication? The starting point of the argument might plausibly be the "principle of contemporaneity"—with regard to the normative environment as it existed at the moment when the obligation entered into force for a relevant party.[683] When might the treaty language itself, in its context, provide for taking account of future developments? Examples of when this might be a reasonable assumption include, at least:

(*a*) Use of a term in the treaty which is "not static but evolutionary".[684] This is the case where the parties, by their choice of language, intend to key into that evolving meaning without adopting their own idiosyncratic definition (for example, use of terms such as "expropriation" or "continental shelf" in the relevant treaty).[685] This may also be the case where, by reading that language against its object and purpose, it appears that the parties have committed themselves to a programme of progressive development;[686]

(*b*) The description of obligations in very general terms, thus operating a kind of *renvoi* to the state of the law at the time of its application. Thus, the general exceptions in article XX of GATT, discussed in the *Shrimp–Turtle case*, in permitting measures "necessary to protect human, animal or plant life or health" or "relating to the conservation of exhaustible natural resources" are intended to adjust to the situation as it develops over

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appreciated in the light of the law contemporary with it, and not of the law in force at the time when a dispute … arises" ("contemporaneity"); and "[t]he same principle which subjects the act creative of a right to the law in force at the time the right arises, demands that the existence of the right, in other words its continued manifestation, shall follow the conditions required by the evolution of law" (*Island of Palmas (Netherlands/United States of America)*, award of 4 April 1928, UNRIAA, vol. II (Sales No. 1949.V.1), p. 829, at p. 845).

[679] Third report on the law of treaties by Sir Humphrey Waldock, Special Rapporteur (A/CN.4/167 and Add.1–3) (see footnote 323 above), p. 8, draft article 56, para. 1.

[680] *Ibid.*, p. 9, draft article 56, para. 2.

[681] *Yearbook ... 1964*, vol. I, p. 34, summary record of the Commission's 728th meeting, held on 21 May 1964, para. 10. Thirlway suggests a rather qualified version of the doctrine: "Provided that, where it can be established that it was the intention of the parties that the meaning or scope of a term or expression used in the treaty should follow the development of the law, the treaty must be interpreted so as to give effect to that intention" (Thirlway, "The law and procedure of the International Court of Justice 1960–1989 (Part Three)" (see footnote 586 above), p. 57). See also Thirlway, "The law and procedure of the International Court of Justice 1960–1989 (Part One)" (footnote 98 above), pp. 135–143, and R. Higgins, "Time and the law: international perspectives on an old problem", *International and Comparative Law Quarterly*, vol. 46, No. 3 (July 1997), p. 501, at pp. 515–519.

[682] This was, after all, the very reason why the Commission failed to come up with an article on this question.

[683] This expresses the "primary necessity of interpreting an instrument in accordance with the intentions of the parties at the time of its conclusion" (*Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)* (see footnote 491 above), p. 31, para. 53).

[684] Jennings and Watts (eds.), *Oppenheim's International Law* (see footnote 37 above), p. 1282. The standard example is the use of the notion of "sacred trust of civilization" as part of the mandate regime of the League of Nations. See *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)* (footnote 491 above), p. 31, para. 53.

[685] Thus, in the *Aegean Sea Continental Shelf* case, the International Court of Justice applied the presumption according to which a generic term is "intended to follow the evolution of the law and to correspond with the meaning attached to the expression by the law in force at any given time" (*Aegean Sea Continental Shelf, Judgment, I.C.J. Reports 1978*, p. 3, at p. 32, para. 77).

[686] This was the situation in the *Gabčíkovo-Nagymaros* case before the International Court of Justice. "[T]he Court wishes to point out that newly developed norms of environmental law are relevant for the implementation of the Treaty and that the parties could, by agreement, incorporate them [into] the Treaty. [Articles 15, 19 and 20] do not contain specific obligations of performance but require the parties, in carrying out their obligations to ensure that the quality of water in the Danube is not impaired and that nature is protected, to take new environmental norms into consideration when agreeing upon the means to be specified in the Joint Contractual Plan. By inserting these evolving provisions in the Treaty, the parties recognized the potential necessity to adapt the Project. Consequently, the Treaty is not static, and is open to adapt to emerging norms of international law" (*Gabčíkovo-Nagymaros Project* (see footnote 119 above), pp. 67–68, para. 112). See also the separate opinion of Judge Weeramantry, *ibid.*, pp. 113–115.

time.[687] For example, the measures necessary to protect shrimp evolve depending upon the extent to which the survival of the shrimp population is threatened. Although the broad meaning of article XX may remain the same, its actual content will change over time. In that context, reference to "other rules of international law", such as multilateral environment treaties, becomes a form of secondary evidence supporting the enquiry into science and community values and expectations that the ordinary meaning of the words, and their object and purpose, invites.

4. Conclusion

479. Article 31, paragraph 3 (*c*), of the 1969 Vienna Convention and the "principle of systemic integration" to which it gives expression summarize the results of the previous sections. They call upon a dispute settlement body—or a lawyer seeking to find out "what the law is"—to situate the rules being invoked by those concerned in the context of other rules and principles that might have a bearing upon the case. In this process, the more concrete or immediately available sources are read against each other and against the general law "in the background". What this reading of rules "against each other" might mean cannot be stated in the abstract. But what the outcome of that specific reading is may in fact, from the perspective of article 31, paragraph 3 (*c*), be less important than the fact that, whatever the outcome, the justification for that outcome refers back to the wider legal environment, indeed the "system" of international law as a whole.

480. The way in which "other law" is "taken into account" is quite crucial to the parties and to the outcome of any single case. The principle of systemic integration, however, looks beyond individual cases. By making sure that the outcome is linked to the legal environment, and that adjoining rules are considered—perhaps applied, perhaps invalidated, perhaps momentarily set aside—any decision also articulates the legal and institutional environment with regard to substantive preferences, distributionary choices and political objectives. This articulation is quite important in a decentralized and spontaneous institutional world, the priorities and objectives of which are often poorly expressed. It is also important for the critical and constructive development of international institutions, especially institutions with law-applying tasks. To hold those institutions as fully isolated from each other and as only paying attention to their own objectives and preferences is to think of law only as an instrument for attaining regime objectives. But law is also about protecting rights and enforcing obligations, above all rights and obligations that have a backing in something like a general, public interest. Without the principle of "systemic integration" it would be impossible to give expression to and keep alive any sense of the common good of humankind, not reducible to the good of any particular institution or "regime".

[687] "From the perspective embodied in the preamble of the WTO Agreement, we note that the generic term 'natural resources' in Article XX (*g*) is not 'static' in its content or reference but is rather 'by definition, evolutionary'" (*United States—Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body report (see footnote 223 above), para. 130).

Chapter VI

General conclusions

A. The nature of fragmentation

481. One aspect of globalization is the emergence of technically specialized cooperation networks with a global scope: trade, the environment, human rights, diplomacy, communications, medicine, crime prevention, energy production, security, indigenous cooperation and so on—spheres of life and expert cooperation that transcend national boundaries and are difficult to regulate through traditional international law. National laws seem insufficient owing to the transnational nature of the networks, while international law but inadequately takes account of their specialized objectives and needs.

482. As a result, such networks tend to develop their own rules and rule systems. Sometimes this takes place informally, through the adoption by leading actors of forms of behaviour or standardized solutions that create expectations or are copied by others. Sometimes coordination is achieved through the harmonization of national or regional laws and regulations, for example through increasing standardization of contract forms or liability rules. But frequently specialized rules and rule systems also emerge through intergovernmental cooperation, and in particular with the assistance of (specialized) intergovernmental organizations. The result is the emergence of regimes of international law that have their basis in multilateral treaties and acts of international organizations, specialized treaties and customary patterns that are tailored to the needs and interests of each network but rarely take account of the outside world.

483. This is the background to the concern about fragmentation of international law: the rise of specialized rules and rule systems that have no clear relationship to each other. Answers to legal questions become dependent on whom you ask, what rule system your focus is on. Accordingly, this study has sought answers to questions that, though they seem quite elementary, have not often been addressed: what is the nature of specialized rule systems? How should their relations *inter se* be conceived? Which rules should govern their conflicts?

B. The perspective of this study

484. This study has not aimed to set up definite relationships of priority between international law's different rules or rule systems. To that extent, its results may seem unsatisfactory or at least inconclusive. However, such priorities cannot be justifiably attained by what is merely an elucidation of the process of legal reasoning. They should reflect the (political) preferences of international actors, above all States. Normative conflicts do not arise as technical "mistakes" that could be "avoided"

by a more sophisticated method of legal reasoning. New rules and legal regimes emerge as responses to new preferences, and sometimes out of a conscious effort to deviate from preferences as they existed under old regimes. They require a legislative response, not a response of legal technique.

485. But the absence of general hierarchies in international law does not mean that normative conflicts would lead to legal paralysis. The relevant hierarchies must only be established *ad hoc* and with a view to resolving particular problems as they arise. This is where the articles of the 1969 Vienna Convention have their relevance and where a study conducted within the confines of the Commission can make a constructive contribution. The idea has been to illustrate, by examples drawn from the practice of international courts and tribunals, techniques available to lawyers as they approach problems that appear to involve conflicts between rules or rule systems.

486. A key point made in this study is that normative conflict is endemic to international law. Because of the spontaneous, decentralized and non-hierarchical nature of international law-making—law-making by custom and by treaty—lawyers have always had to deal with heterogeneous materials at different levels of generality and with different normative force. In its very first case, the Permanent Court of International Justice was, as we have seen, faced with having to resolve the question of the conflict or overlap between two sets of rules: the Treaty of Versailles and the right of a neutral power in time of war to control access to belligerent territory. Nevertheless, by an interpretation of German sovereignty and the invocation of precedent (the Panama and Suez canals), the Court was able to establish the priority of the Treaty of Versailles.[688] Since then, it has been routine for international tribunals to establish the rights and duties of States or of other subjects by reference to many types of legal materials that are applicable, as part of the work that they are called upon to do.

487. But addressing problems at this level—conflicts as they arise—will mean that they are addressed in a formal and open-ended way, as matters of legal technique rather than substantive (politico-legal) preference. This report has, in a way, bought its acceptability by its substantive emptiness. Yet this "formalism" is not without its own agenda. The very effort to canvass coherent legal technique in a fragmented world expresses the conviction that conflicts between specialized regimes may be overcome by law, even though the law may not go much further than requiring a willingness to listen to others, take their points of view into account and find a reasoned resolution at the end. Yet this may simply express the very point for which international law has always existed. The move from a world fragmented into sovereign States to a world fragmented into specialized "regimes" may not, in fact, require a fundamental transformation of public international law at all—though it may call for imaginative uses of traditional techniques. There were always States that regarded international law as incompatible with their sovereignty. Similarly, there may today exist global regimes or rule complexes that feel international law to be an alien intrusion. There is as little reason to concede the logic of "clinical isolation" in the latter case as there was in the former. If the view of a State cannot be the last word on the international lawfulness of its activities, then neither can the viewpoint of a rule or a regime alone determine what its international legal implications are. If international law is needed as a structure for coordination and cooperation among (sovereign) States, it is no less needed in order to coordinate and organize cooperation among (autonomous) rule complexes and institutions.

488. Special rules and rule complexes are undoubtedly necessary, somewhat in the sense that different sovereignties are. The world is irreducibly pluralistic. The law cannot resolve in an abstract way any possible conflict that may arise between economic and environmental regimes, between human rights and diplomatic immunity or between a universal law of the sea regime and a regional fisheries treaty. Each has its experts and its ethos, its priorities and preferences, its structural bias. Such regimes are institutionally "programmed" to prioritize particular concerns over others. The concern over fragmentation has been about the continued viability of traditional international law—including the techniques of legal reasoning that it imports—under conditions of specialization. Do Latin maxims (*lex specialis*, *lex posterior*, *lex superior*) still have relevance in the resolution of conflicts produced in a situation of economic and technological complexity? Although this report answers this question in the positive, it also highlights the limits of the response. Public international law does not contain rules in which a global society's problems are, as it were, already resolved. Developing these is a political task.

489. Concern over the fragmentation of international law has an institutional and a substantive aspect. At an institutional level, the proliferation of implementation organs—often courts and tribunals—for specific treaty regimes has given rise to concern over deviating jurisprudence and "forum-shopping". The rights and obligations of legal subjects may depend on which body is seized to recognize them. Following decisions by the Commission in 2002 and 2003, this report set aside the institutional aspects of fragmentation. Instead, it focused on substantive problems: the emergence of "special laws", treaty regimes and functional clusters of rules and specialized branches of international law and their relationship *inter se* and to general international law. Particular attention has been given to the application of the *lex specialis* and *lex posterior* maxims and to relationships of importance and the notion of "system" in international law. The focus throughout has been provided by the 1969 Vienna Convention, with a conscious effort, nonetheless, to read that treaty itself in its systemic environment, consisting in part of the practices of international tribunals and other law-applying bodies and in part of the general international law of which it forms part. The draft operative conclusions of the work of the Study Group are set out in detail in the annex to this report.

490. Not all substantive problems have been dealt with. For example, questions about "soft law", as a special type of law with its own idiosyncratic ("soft") enforcement and dispute settlement mechanisms, have not been subjected to discussion. Nevertheless, to the extent that soft law claims to exist "in clinical isolation" from "hard

[688] *S.S. "Wimbledon"* (see footnote 150 above), pp. 25, 28–30.

law", much of what has been said about the relationships between special and general law in chapter II applies to it. Likewise, questions having to do with the emergence of patterns of constraint out of private or combined public–private activities—including *lex mercatoria* or other types of informal regulation of transnational activities—and their effects on traditional law-making have been left outside this study. A discussion of the extent to which new types of "global law" might be emerging outside the scope of traditional, State-centric international law would require quite a different type of exercise. This is not to say, however, that the 1969 Vienna Convention or indeed general international law could not be used to channel and control these patterns of informal, often private-interest-based types of regulation as well. The more complex and flexible the ways in which treaty law allows the use of framework treaties, of clusters of treaties and of regimes consisting of many types of normative materials, the more such decentralized, private regulation may be encompassed within the scope of international law.

C. Between coherence and pluralism: suggestions for further work

491. Fragmentation calls into question the coherence of international law. Coherence is valued positively owing to the connection it has with predictability and legal security. Moreover, only a coherent legal system treats legal subjects equally. Coherence is, however, a formal and abstract virtue. For a legal system that is regarded in some respects as unjust or unworkable, no added value is brought by the fact of its being coherently so. Therefore, alongside coherence, pluralism should be understood as a constitutive value of the system. Indeed, in a world of plural sovereignties, this has always been the case.

492. Even as international law's diversification may threaten its coherence, it does this by increasing its responsiveness to the regulatory context. Fragmentation moves international law in the direction of legal pluralism but does this, as the present report has sought to emphasize, by constantly using the resources of general international law, especially the rules of the 1969 Vienna Convention, customary law and "general principles of law recognized by civilized nations". *One principal conclusion of this report has been that the emergence of special treaty regimes (which should not be called "self-contained") has not seriously undermined legal security, predictability or the equality of legal subjects*. The techniques of *lex specialis* and *lex posterior*, of *inter se* agreements and of the superior position given to peremptory norms and the (so far under-elaborated) notion of "obligations owed to the international community as a whole" provide a basic professional toolbox that is able to respond in a flexible way to most substantive fragmentation problems. They can be used to give expression to concerns (*e.g.* economic development, human rights, environmental protection, security) that are legitimate and strongly felt.

493. The international legal system has never enjoyed the kind of coherence that may have characterized the legal orders of States. Nonetheless, the deepening complexity of late modern societies, tolerance and encouragement of conflicting traditions and social objectives within national societies, and the needs of technical specialization have all also undermined the homogeneity of the nation State. Today, the law of late modern States emerges from several quasi-autonomous normative sources, both internal and external. While this may have undermined the constitutional coherence of national law, it has been counterbalanced by the contextual responsiveness and functionality of the emerging (moderate) pluralism. In an analogous fashion, the emergence of conflicting rules and overlapping legal regimes will undoubtedly create problems of coordination at the international level. But—and this is the second main conclusion of this report—*no homogenous, hierarchical meta-system is realistically available to do away with such problems*. International law will need to operate within an area where the demands of coherence and reasonable pluralism will point in different directions. In order for it to do this successfully, *increasing attention will have to be given to the collision of norms and regimes and the rules, methods and techniques for dealing with such collisions*. How this might be done is explained in detail in the proposal for the conclusions of the Study Group set out in the annex. In addition, this might require at least three efforts:

(*a*) Focus on the role of the 1969 Vienna Convention as the basis for an "international law of conflicts";

(*b*) Focus on the notion and operation of "regimes";

(*c*) Examination of the notion of "general international law".

1. The Vienna Convention on the Law of Treaties as the basis for an "international law of conflicts"

494. The Commission decided to situate its work on this matter within the confines of the 1969 Vienna Convention. This report suggests that this decision was well-founded. As has been explained in detail, the Convention provides the normative basis—the "toolbox"—for dealing with fragmentation. There is no reason why it should not also provide the basis for the further development of an "international law of conflicts". Conflicts between treaties, treaty regimes and treaties and other legal sources will inevitably also emerge in the future, perhaps increasingly. In the absence of fixed hierarchies, such conflicts can only be resolved by "collision rules" that take account both of the need for coherence and of contextual sensitivity. When developing such collision rules, several aspects of the 1969 Vienna Convention might be subjected to closer scrutiny.

495. For example, the Convention's treatment of bilateral and multilateral treaties by means of identical rules seems unsatisfactory. The problems that emerge are different and should be dealt with through different techniques. In the interpretation of bilateral treaties, for example, party intent is relatively easy to identify, whereas multilateral treaties emerge as package deals or bargains and seldom have a single, clearly defined party intent. Furthermore, there is presently no recognition of the special nature of "framework treaties" and "implementation treaties", while much of this report has suggested that such treaties have special types of relations that cannot be identified with relations between just any treaties. Moreover, nothing has undermined Fitzmaurice's original

point that human rights and humanitarian law treaties, for example (as well as, for instance, environmental treaties), form a special class of non-bilateral ("integral" or "interdependent") instruments that cannot be operated through the same techniques as "ordinary" treaties creating bilateral relationships. Throughout this report we have seen how the nature of a treaty—including its object and purpose—has limited the freedom of treaty parties to deviate by way of *lex specialis* or *inter se* agreement. But in fact the conventional priority accorded to special law over general law, and the equally conventional techniques for overruling that priority, are already aspects of an informal treaty hierarchy that has often been overshadowed by the focus on the formal hierarchy expressed in the language of *jus cogens* or Article 103 of the Charter of the United Nations.

496. In general, the 1969 Vienna Convention gives insufficient recognition to special types of treaties and the special rules that might serve to interpret and apply them. More work here seems necessary. *It is proposed to develop guidelines on how the 1969 Vienna Convention provisions might give recognition to the wide variation of treaty types and normative implications of such types and whether it might be possible to set up informal guidelines on how to deal with treaty conflicts. The following themes, at least, might be part of such an effort*:

(*a*) The difference between bilateral and multilateral treaty relations should be given greater recognition;

(*b*) The process of international "legislation" through multilateral treaties adopted in order to realize specific, technical rules should be further examined. This could involve establishing a typology of treaty provisions amenable to different treatment. These typologies might, for example, contrast "programmatic" provisions with provisions that set up subjective rights and "hard law" provisions associated with formal responsibility with "soft law" provisions under special "soft responsibility" regimes;

(*c*) The notions of a "framework treaty" and an "implementation treaty" should be further elaborated, especially with a view to highlighting the special (hierarchical) relationships between them and between the institutions they set up;

(*d*) Greater recognition should be given to the distinction between multilateral conventions whose provisions are "bilateralizable" and those that are not (*i.e.* "integral" treaties or treaties setting out "interdependent" or otherwise "absolute" obligations);

(*e*) What it means for obligations to be owed "to the international community as a whole" (*erga omnes* obligations) or to the "community of States parties as a whole" (obligations *erga omnes partes*) should be further elaborated;

(*f*) Recent practice has developed a wide range of models for "conflict clauses" that seek to eliminate or deal with potential conflicts between treaties. Often, however, these clauses are unclear or ambivalent. What does it mean, for example, for two treaties to be understood in a "mutually supportive" way?

2. Into a law of regimes

497. Much of this study has pointed to the increasing importance of chains or clusters of treaties, including relationships between framework treaties and implementation treaties. In practice, fragmentation takes place through the development of networks of international rules and instruments that for all practical purposes—including the purpose of interpretation—are treated as single "wholes" or "regimes". This study has identified three types of special regime:

(*a*) Special sets of secondary rules of State responsibility;

(*b*) Special sets of rules and principles on the administration of a determined problem;

(*c*) Special branches of international law with their own principles, institutions and teleology.

498. Neither the 1969 Vienna Convention nor international arbitral and judicial practice has so far given any developed articulation to these special kinds of wholes. From this study it transpires, however, that a "regime" may function within a formal treaty, within a set of formal treaties and institutions, or in more broadly "cultural" ways. Conflicts between rules *within* a regime appear differently and should probably be treated differently from conflicts *across* regimes. "Regimes" may also have non-governmental participants and represent non-governmental interests in a fashion that might influence their interpretation and operation. Often regimes operate on the basis of administrative coordination and "mutual supportiveness", the point of which is to seek regime-optimal outcomes. While this is clearly appropriate in regard to treaty provisions that are framed in general or "programmatory" terms, it seems less proper in regard to provisions establishing subjective rights, or obligations whose purpose it is to guarantee such rights. Disputes concerning the operation of regimes may not always be properly dealt with by the same organs that have to deal with the recognition of claims of rights. Likewise, when conflicts emerge between treaty provisions that have their home in different regimes, care should be taken to guarantee that any settlement is not dictated by organs exclusively linked with one or other of the conflicting regimes.

499. It is suggested that the Commission could outline the roles of special regimes in some or several of the three senses. For this purpose, it could examine the following areas:

(*a*) The types of international and transnational regimes that have come to exist as a result of the process of globalization;

(*b*) The manner of the autonomous operation of regimes. This could involve questions such as the formation and operation of internal regime hierarchies, the principles of interpretation applicable to regime instruments, the specific types of rules or institutions needed to enable the coherent operation of regimes, and so on;

(*c*) The role of general (public) international law in regimes, including in resolving interpretative conflicts and

providing for responsibility for any violation of regime rules. The relations of public and private law, including soft law and other non-binding instruments, within such regimes could be examined;

(*d*) Many provisions in technical treaty regimes have an exhortatory, procedural or "programmatic" character. Such provisions contrast sharply with provisions providing subjective rights or obligations. While the former may easily be adjusted in the event of conflicts (or, for example, lack of resources), the latter are not so easily "balanced" or "coordinated". Any study of regime rules should take into account such contrasts in the normative power of particular regime rules;

(*e*) The conditions and consequences of regime failure. What counts as "regime failure" in the first place? When do the procedural means of redress of general law, normally suspended, become applicable?

(*f*) The whole complex of inter-regime relations is presently a legal black hole. What principles of conflict resolution might be used to deal with conflicts between two regimes or between instruments across regimes?

(*g*) The settlement of disputes within regimes may not be subject to the same rules or procedures as settlement of disputes across regimes. For the latter case, there is a particular need to ensure that impartial settlement mechanisms are available.

3. The nature and operation of "general international law"?

500. As we have seen throughout this study, fragmentation takes place against the background of and often by express reference to not only the 1969 Vienna Convention but also something called "general international law". However, there is no well-articulated or uniform understanding of what this might mean. "General international law" clearly refers to general customary law, as well as to the "general principles of law recognized by civilized nations" under Article 38, paragraph 1 (*c*), of the Statute of the International Court of Justice. But it might also refer to principles of international law proper and to analogies from domestic laws, especially principles of the legal process (*audiatur et altera pars*, *in dubio mitius*, estoppel and so on). In the practice of international tribunals, including the WTO Appellate Body, the European Court of Human Rights and the Inter-American Court of Human Rights, reference is constantly made to various kinds of "principles", sometimes drawn from domestic law, sometimes from international practice, but often in a way that leaves their authority unspecified.

501. Much of the substance of "general international law" was canvassed in the study commissioned by the Secretary-General of the United Nations in 1948 from Hersch Lauterpacht so as to start off the work of the Commission in the codification and progressive development of international law.[689] In 1996, the Commission analysed the scope for progressive development and codification after nearly fifty years of work and, in order to provide a global review of the main fields of general public international law, set up a general scheme of topics of international law classified under thirteen main fields.[690] Whatever the prospects for "codification and progressive development" today, it seems clear that most of the development of international law will take place within specialized law-making conferences and organizations on the basis of specialist preparatory work and will lead to complex treaty regimes with their own institutional provisions and procedures. This is indeed part of the background from which the concern about fragmentation once arose.

502. In an increasingly specialized legal environment, few institutions are left to speak the language of general international law, with the aim of regulating, at a universal level, relationships that cannot be reduced to the realization of special interests and that go further than technical coordination. The Commission is one such institution. The codification and development work it has carried out has been precisely about elucidating the content of "general international law" as an aspect of what can only be understood as a kind of an international public realm. The fact that in this study it has been possible to develop an overarching standpoint by taking the perspective of the 1969 Vienna Convention has shown that general international law speaks to present concerns not so much in terms of substantive rules and principles—after all, a large part thereof has already been codified—but as a formal argumentative technique. In an important sense, it is that technique which represents what is "general" in a world of proliferating technical particularisms.

503. The turn to specialized treaty-making and the diminishing subjects on the Commission's agenda demonstrate that there is a limit to what can be attained in terms of codification and progressive development of universal rules. At some point, the threshold is crossed at which the necessary generality and abstraction that is the price to be paid for the universal scope of treaty law becomes unnecessarily high. Under the frame of "universal" rules, what in fact often takes place is specialist rule-making through what formally appears as only the implementation of general (but completely indeterminate) standards at a local or technically specialized level. At that point, it becomes useful to draw attention to the way "general international law" appears constantly in the practice of regional and specialized institutions. It is this general international law that provides the rudiments of an international public realm, from the perspective of which the specialized pursuits and technical operations carried out under specific treaty regimes may be evaluated.

504. Thus, it is proposed that the Commission should increasingly pursue the avenue of "restatement" of general international law in forms other than codification and progressive development—not as a substitute for but as a supplement to them. Such restatement work might focus, for example, on the following:

(*a*) What sources are covered by references to "general international law"?

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[689] Survey of International Law in Relation to the Work of Codification of the International Law Commission, memorandum submitted by the Secretary-General (A/CN.4/1/Rev.1, United Nations publication, Sales No. 48.V.1(1)), also published in Lauterpacht, *International Law: Collected Papers*, vol. I (footnote 106 above), pp. 445–530.

[690] *Yearbook ... 1996*, vol. II (Part Two), paras. 246–248 and annex II.

(*b*) How does "general international law" appear in international treaty law and in the practice of international and domestic courts and tribunals, as well as of other international law-applying bodies?

(*c*) To what extent might successful "codification and progressive development" today in fact necessitate studies—properly carried out by the Commission—on the emergence and spontaneous operation of general international law?

ANNEX

DRAFT CONCLUSIONS OF THE WORK OF THE STUDY GROUP, FINALIZED BY MR. MARTTI KOSKENNIEMI

A. Introduction

1. At its fifty-fourth session (2002), the International Law Commission established a Study Group to examine the topic "Fragmentation of international law: difficulties arising from the diversification and expansion of international law".[1] At its fifty-fifth session (2003), the Commission adopted a tentative schedule for work to be carried out during the remaining part of the quinquennium (2003–2006) and allocated to five of its members the task of preparing outlines on the following topics:

(*a*) The function and scope of the *lex specialis* rule and the question of self-contained regimes (Mr. Martti Koskenniemi);

(*b*) The interpretation of treaties in the light of "any relevant rules of international law applicable in the relations between the parties" (art. 31, para. 3 (*c*), of the 1969 Vienna Convention), in the context of general developments in international law and concerns of the international community (Mr. William Mansfield);

(*c*) The application of successive treaties relating to the same subject matter (art. 30 of the 1969 Vienna Convention) (Mr. Teodor Melescanu);

(*d*) The modification of multilateral treaties between certain of the parties only (art. 41 of the 1969 Vienna Convention) (Mr. Riad Daoudi); and

(*e*) Hierarchy in international law: *jus cogens*, obligations *erga omnes* and Article 103 of the Charter of the United Nations as conflict rules (Mr. Zdzislaw Galicki).[2]

2. During its fifty-sixth (2004) and fifty-seventh (2005) sessions, the Study Group received a number of outlines and studies on these topics. It affirmed that it was its intention to prepare, as the substantive outcome of its work, a single collective document consisting of two parts. One would be a "relatively large analytical study" that would summarize the content of the various individual reports and the discussions of the Study Group. This forms the bulk of the report prepared by the Chairperson of the Study Group in 2006. The other part would be "a condensed set of conclusions, guidelines or principles emerging from the studies and the discussions in the Study Group".[3] As the Study Group itself held, and the Commission endorsed, these should be "a concrete, practice-oriented set of brief statements that would work, on the one hand, as the summary and conclusions of the Study Group's work and, on the other hand, as a set of practical guidelines to help in thinking about and dealing with the issue of fragmentation in legal practice".[4]

3. This annex sets out a draft for those "conclusions, guidelines or principles". The draft reproduces the result of the extensive deliberations the Study Group had undertaken in 2004 and 2005. They are a collective product by the members of the Study Group.

4. It should be noted, however, that:

(*a*) Only the formulation of conclusions 1 to 23, based on the studies referred to in paragraphs 1 (*a*)–(*c*) above, have so far been provisionally agreed to by the Study Group;

(*b*) Draft conclusions 24 to 32, dealing with the topic referred to in paragraph 1 (*d*) above under the general title of "Conflicts between successive norms", have been neither presented to nor discussed in the Study Group. They have been formulated by the Chairperson of the Study Group as a proposal to be discussed during the fifty-eighth session (2006);

(*c*) Draft conclusions 33 to 43 are based on the report referred to in paragraph 1 (*e*) above. They were distributed to the Study Group in 2005 but have not been subjected to in-depth discussion. It is proposed that they be discussed and adopted in the course of the finalization of the Study Group's work during the Commission's fifty-eighth session in 2006.

5. The Chairperson of the Study Group wishes to reproduce all the draft conclusions below. The suggestion is that the conclusions would be adopted by the Study Group and submitted to the Commission for appropriate action.

B. Draft conclusions of the work of the Study Group on "Fragmentation of international law: difficulties arising from the diversification and expansion of international law"

(a) *General*

(1) *International law as a legal system*. International law is a legal system. Its rules and principles (*i.e.* its norms) act in relation to and should be interpreted against the background of other rules and principles. As a legal system, international law is not a random collection of such norms. There are meaningful relationships between them. Norms may thus exist at higher and lower hierarchical levels, their formulation may involve greater or lesser generality and specificity, and their validity may date back to earlier or later moments in time.

(2) In applying international law, it is often necessary to determine the precise relationship between two or more rules and principles that are both valid and applicable in respect of a situation.[5] For that purpose, the relevant relationships fall into two general types:

[1] *Yearbook … 2002*, vol. II (Part Two), paras. 492–494.

[2] *Yearbook … 2003*, vol. II (Part Two), paras. 424–428.

[3] *Yearbook … 2005*, vol. II (Part Two), para. 448.

[4] *Ibid*.

[5] That two norms are valid in regard to a situation means that they each cover the facts of which the situation consists. That two norms are applicable in a situation means that they have binding force in respect to the legal subjects finding themselves in the relevant situation.

– *Relationships of interpretation*. This is the case where one norm assists in the interpretation of another. A norm may assist in the interpretation of another norm for example as an application, clarification, updating or modification of the latter. In such situation, both norms are applied in conjunction.

– *Relationships of conflict*. This is the case where two norms that are both valid and applicable point to incompatible decisions so that a choice must be made between them. The basic rules concerning the resolution of normative conflicts are to be found in the 1969 Vienna Convention.

(3) *The Vienna Convention on the Law of Treaties*. When seeking to determine the relationship of two of more norms to each other, the norms should be interpreted in accordance with or analogously to the 1969 Vienna Convention and especially the provisions in its articles 31 to 33 having to do with the interpretation of treaties.

(4) *The principle of harmonization*. It is a generally accepted principle that when several norms bear on a single issue they should, to the extent possible, be interpreted so as giving rise to a single set of compatible obligations.

(b) *The maxim "*lex specialis derogat legi generali*"*

(5) *General principle*. The maxim *lex specialis derogat legi generali* is a generally accepted technique of interpretation and conflict resolution in international law. It suggests that, whenever two or more norms deal with the same subject matter, priority should be given to the norm that is more specific. The principle may be applicable in several contexts: between provisions within a single treaty, between provisions within two or more treaties, between a treaty and a non-treaty standard, as well as between two non-treaty standards. The source of the norm (whether treaty, custom or general principle of law) is not decisive for the determination of the more specific standard. However, in practice treaties often act as *lex specialis* by reference to the relevant customary law and general principles.

(6) *Contextual appreciation*. The relationship between the *lex specialis* maxim and other norms of interpretation or conflict solution cannot be determined in a general way. Which consideration should be predominant—*i.e.* whether it is the speciality or the time of emergence of the norm—should be decided contextually.

(7) *Rationale for the principle*. That special law has priority over general law is justified by the fact that such special law, being more concrete, often takes better account of the particular features of the context in which it is to be applied than any applicable general law. Its application may also often create a more equitable result and it may often better reflect the intent of the legal subjects.

(8) *Dispositive nature of most international law*. Most international law is dispositive. This means both that it may be applied, clarified, updated or modified as well as be set aside by special law.

(9) *The effect of* lex specialis *on general law*. The application of the special law does not normally extinguish the relevant general law. That general law will remain valid and applicable and will, in accordance with the principle of harmonization under paragraph (4) above, continue to give direction for the interpretation and application of the relevant special law and will become fully applicable in situations not provided for by the latter.

(10) *Non-derogability*. Certain types of general law[6] may not, however, be derogated from by special law. *Jus cogens* is expressly non-derogable. Other considerations that may provide a reason for concluding that a general law is non-derogable include the following:

– Whether the general law was intended to be non-derogable;

– Whether non-derogability may be inferred from the form or the nature of the general law;

– Whether derogation might frustrate the *purpose* of the general law;

– Whether third party beneficiaries may be negatively affected by derogation; and

– Whether the balance of rights and obligations established in the general law would be negatively affected by derogation.

A norm that purports to set aside or derogate from a norm that is non-derogable will be invalid.

(c) *Special ("self-contained") regimes*

(11) *Special ("self-contained") regimes as* lex specialis. A group of rules and principles concerned with a particular subject matter may form a special regime ("self-contained regime") and be applicable as *lex specialis*. Such special regimes often have their own institutions to administer the relevant rules.

(12) Three types of special regime may be distinguished:

– Sometimes violation of a particular group of (primary) rules is accompanied by a special set of (secondary) rules concerning breach and reactions to breach. This is the main case provided for under article 55 of the Commission's draft articles on responsibility of States for internationally wrongful acts.[7]

– Sometimes, however, a special regime is formed by a set of special rules, including rights and obligations, relating to a special subject matter. Such rules may concern a geographical area (*e.g.* a treaty on the protection of a particular river) or some substantive matter (*e.g.* a treaty on the regulation of the uses of a particular weapon). Such a special regime may emerge on the basis of a single treaty, several treaties, or treaty and treaties plus non-treaty developments (subsequent practice or customary law).

[6] [The notion of "general law" may yet need to be clarified.]

[7] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 140–141.

– Finally, sometimes all the rules and principles that regulate a certain problem area are collected together so as to express a "special regime". Expressions such as "law of the sea", "humanitarian law", "human rights law", "environmental law" and "trade law", *etc.*, give expression to some such regimes. For interpretative purposes, such regimes may often be considered as wholes.

(13) *Effect of the "speciality" of a regime*. The significance of a special regime lies in the way its norms express a unified object and purpose. Thus, their interpretation and application should, to the extent possible, reflect that object and purpose.

(14) *The relationship between special regimes and general international law*. A special regime may derogate from general law under the same conditions as *lex specialis* generally (see paras. (6) and (8) above).

(15) *The role of general law in special regimes I: gap-filling*. The scope of special laws is by definition narrower than that of general laws. It will thus frequently be the case that a matter not regulated by special law will arise in the institutions charged to administer it. In such cases, the relevant general law will be applicable.

(16) *The role of general law in special regimes II: failure of special regimes*. Special regimes or the institutions set up by them may fail to operate as intended. In such case, the relevant general law becomes applicable. Failure should be inferred when the special laws have no reasonable prospect of appropriately addressing the objectives for which they were enacted. It could be manifested, for example, by the failure of the regime's institutions to fulfil the purposes allotted to them, endemic non-compliance by one or several of the parties, desuetude, withdrawal by parties instrumental for the regime, among other causes. Whether a regime has "failed" in this sense, however, needs to be decided above all by an interpretation of its constitutional instruments.

(d) *Article 31, paragraph 3 (*c*), of the Vienna Convention on the Law of Treaties*

(17) *Systemic integration*. Article 31, paragraph 3 (*c*), of the 1969 Vienna Convention provides one means, within the framework of the Convention, through which relationships of interpretation (referred to in para. (2) above) may be applied. It requires the interpreter of a treaty to take into account "[a]ny relevant rules of international law applicable in the relations between the parties". The article gives expression to the objective of "systemic integration", according to which, whatever their subject matter, treaties are a creation of the international legal system and their operation is predicated upon that fact.

(18) *Interpretation as integration in the system*. Systemic integration governs all treaty interpretation, the other relevant aspects of which are set out in the other paragraphs of articles 31 and 32 of the 1969 Vienna Convention. These paragraphs describe a process of legal reasoning, in which particular elements will have greater or less relevance depending upon the nature of the treaty provisions in the context of interpretation. In many cases, the issue of interpretation will be capable of resolution within the framework of the treaty itself. Article 31, paragraph 3 (*c*), deals with the case where material sources external to the treaty are relevant in its interpretation. These may include other treaties, customary rules or general principles of law.

(19) *Application of systemic integration*. Where a treaty functions in the context of other agreements, the objective of systemic integration will apply as a presumption with both positive and negative aspects:

(*a*) *Positive presumption*: The parties are taken to refer to customary international law and general principles of law for all questions which the treaty does not itself resolve in express terms.

(*b*) *Negative presumption*: In entering into treaty obligations, the parties do not intend to act inconsistently with [generally recognized] principles of international law.

Of course, if any other result is indicated by ordinary methods of treaty interpretation, that should be given effect, unless the relevant principle were part of *jus cogens.*

(20) *Application of custom and general principles of law*. Customary international law and general principles of law are of particular relevance to the interpretation of a treaty under article 31, paragraph 3 (*c*), especially where:

(*a*) The treaty rule is unclear or open-textured;

(*b*) The terms used in the treaty have a recognized meaning in customary international law or under general principles of law;

(*c*) The treaty is silent on the applicable law and it is necessary for the interpreter, applying the positive presumption in paragraph (19) (*b*) above, to look for rules developed in another part of international law to resolve the point.

(21) *Application of other treaty rules*. Article 31, paragraph 3 (*c*), also requires the interpreter to consider other treaty-based rules so as to arrive at a consistent meaning. Such other rules are of particular relevance where parties to the treaty under interpretation are also parties to the other treaty, where the treaty rule has passed into or expresses customary international law or where they provide evidence of the common understanding of the parties as to the object and purpose of the treaty under interpretation or as to the meaning of a particular term.

(22) *Inter-temporality*. International law is a dynamic legal system. Whether in applying article 31, paragraph 3 (*c*), the interpreter should refer to rules of international law in force at the time of the conclusion of the treaty or may also take into account subsequent changes in the law depends generally on the meaning of the treaty, as ascertained on the basis of articles 31 and 32 of the 1969 Vienna Convention. However, the meaning of a treaty provision may also be affected by subsequent developments irrespective of the original will of the parties, especially where these subsequent developments are reflected in customary law and general principles of law.

(23) *Open or evolving concepts*. Rules of international law subsequent to the treaty to be interpreted may be taken into account particularly where the concepts used in the treaty are open or evolving. This is the case, in particular, where (*a*) the concept is one which implies taking into account subsequent technical, economic or legal developments; (*b*) the concept sets up an obligation for further progressive development for the parties; or (*c*) the concept has a very general nature or is expressed in such general terms that it must take into account changing circumstances.

(*e*) *Conflicts between successive norms*

(24) *The basic rule*. The question of successive treaty norms covering the same subject matter is dealt with by article 30 of the 1969 Vienna Convention.

(25) *Lex posterior derogat legi priori*. According to article 30, paragraph 3, of the 1969 Vienna Convention, when all the parties to the later treaty are also parties to the earlier treaty, and the earlier treaty is not suspended or terminated, then it applies only to the extent its provisions are compatible with those of the later treaty. This is an expression of the principle according to which "later law supersedes earlier law". The same principle is also expressed in the way treaties generally speaking enjoy priority over earlier customary law.

(26) *Limits of the "lex posterior" principle*. The applicability of the *lex posterior* principle is, however, limited. It cannot, for example, be automatically extended to the case where the parties to the subsequent treaty are not identical to the parties to the earlier treaty. In such cases, as provided in article 30, paragraph 4, of the 1969 Vienna Convention, the State that is party to two incompatible treaties is bound *vis-à-vis* both of its treaty parties separately. In case it cannot fulfil its obligations under both treaties, it will remain responsible for its violation of one of them. In such case, article 60 of the 1969 Vienna Convention may also become applicable. The question of which of the incompatible treaties should be implemented and the breach of which should be sanctioned by State responsibility cannot be answered by a general rule.

(27) *The distinction between treaty provisions that belong to the same "regime" and provisions in different "regimes"*. The *lex posterior* principle is at its strongest in regard to conflicting or overlapping provisions that are part of treaties that are institutionally linked or otherwise intended to advance similar objectives. This is typically the case of the relationship between "framework treaties" and "implementation treaties". In case of conflicts or overlaps between treaties in different regimes, the question of which of them is later in time cannot be taken to express any intrinsic priority between them.

(28) *Mutual accommodation and protection of rights*. In case of conflicting or overlapping treaties within different "regimes", both of the treaties should be implemented as far as possible with a view to mutual accommodation and in accordance with the principle of harmonization. This applies above all to the procedural provisions in such treaties and to provisions set up in implementation programmes and schedules. However, this may not lead to undermining the substantive rights of treaty parties or third-party beneficiaries. The violation of rights entails State responsibility.

(29) *The case of special treaties*. Some treaty provisions enjoy a special normative character so that they shall prevail irrespective of whether they are earlier or later in time. These include:

(*a*) Provisions of the Charter of the United Nations;

(*b*) Provisions embodying *jus cogens*;

(*c*) Provisions that otherwise might be understood as non-derogable because they were so intended, because non-derogability may be inferred from their nature or from the object and purpose of the treaty or for any other reason referred to in paragraph (10) above.

(30) *Settlement of disputes within and across regimes*. Questions regarding priority between conflicting treaty provisions should be resolved by negotiation between parties to the relevant treaties. However, when no negotiated solution is available, recourse ought to be had to mechanisms of dispute settlement. When the conflict concerns provisions within a single regime (as defined in para. (4) above), then its resolution may be appropriate in the regime-specific mechanism. However, when the conflict concerns provisions in treaties that are not part of the same regime, then care should be taken to guarantee that the dispute settlement body is independent from both of the regimes.

(31) *Inter se agreements*. The case of agreements to modify multilateral treaties by certain of the parties only (*inter se* agreements) is covered by article 41 of the 1969 Vienna Convention. Such agreements are an often-used technique for the more effective implementation of the original treaty between a limited number of treaty parties that are willing to take more effective or more far-reaching measures for the realization of the object and purpose of the original treaty. *Inter se* agreements may be concluded if this is provided for by the original treaty or it is not specifically prohibited and it "(i) [d]oes not affect the enjoyment by the other parties of their rights under the treaty or the performance of their obligations; (ii) [d]oes not relate to a provision, derogation from which is incompatible with the effective execution of the object and purpose of the treaty as a whole" (art. 41, para. 1 (*b*), of the 1969 Vienna Convention).

(32) *Conflict clauses*. It is advisable that, when States enter into treaties that might conflict with other treaties, they settle the relationship between such treaties by adopting appropriate clauses in the treaties themselves. When adopting such clauses, it should be borne in mind that:

(*a*) They may not affect the rights of third parties;

(*b*) They should be as clear and specific as possible. In particular, they should be directed to specific provisions of the treaty and they should not undermine the object and purpose of the treaty;

(*c*) For this purpose, they should not be open-ended or otherwise such that it is unclear what, in fact, the obligations parties have undertaken are;

(*d*) They should be linked with appropriate dispute settlement mechanisms.

(*f*) *Hierarchy in international law:* jus cogens*, obligations* erga omnes *and Article 103 of the Charter of the United Nations as conflict rules*

(33) *Hierarchical relations between norms of international law*. The sources of international law (treaties, custom, general principles of law) are not in a hierarchical relationship *inter se*. Drawing analogies from the hierarchical nature of domestic legal systems is not generally appropriate owing to the absence of a well-developed or authoritative hierarchy of values in international law. Nevertheless, some rules of international law are more important than other rules and for this reason enjoy a superior position or special status in the international legal system. This is sometimes expressed by the designation of some norms as "fundamental" or some breaches as "grave". What effect such designations may have is usually determined by the relevant instrument in which that designation appears.

(34) *Recognized hierarchical relations by the substance of the rules I:* jus cogens. A rule of international law may be superior to other rules on account of its content. This is the case of peremptory norms of international law (*jus cogens*, art. 53 of the 1969 Vienna Convention), that is, norms "accepted and recognized by the international community as a whole from which no derogation is permitted".

(35) *The content of* jus cogens. Accepted rules of *jus cogens* include rules prohibiting genocide and torture as well as rules protecting the basic rights of the human person. The right of self-determination as well as the prohibition of the use of force are likewise rules of *jus cogens*. Also other rules may have a *jus cogens* character inasmuch as they are "accepted and recognized by the international community … as a whole".

(36) *Recognized hierarchical relations II: Article 103 of the Charter of the United Nations*. A rule of international law may also be superior to other rules by virtue of a treaty provision. This is the case of Article 103 of the Charter of the United Nations, by virtue of which "[i]n the event of a conflict between the obligations of the Members of the United Nations under the … Charter and their obligations under any other international agreement, their obligations under the … Charter shall prevail."

(37) *Rules recognized by their scope of application: obligations* erga omnes *and the Charter of the United Nations*. Some norms enjoy a special status owing to their scope of applicability. This is the case of obligations *erga omnes*, that is, obligations of a State towards the international community as a whole. These rules concern all States and all States can be held to have a legal interest in their protection. Every State may invoke the responsibility of the State violating such norms. It is also recognized that the Charter of the United Nations itself enjoys special status owing to its virtually universal acceptance.

(38) *The content of obligations* erga omnes. Accepted *erga omnes* norms include rules concerning diplomatic relations. [See State responsibility.] Likewise the right of peoples to self-determination and the rights and duties enshrined in the Convention on the Prevention and Punishment of the Crime of Genocide.

(39) *The relationship between* jus cogens *norms and obligations* erga omnes. It is recognized that while all *jus cogens* norms also have the character of *erga omnes* obligations, the reverse is not necessarily true. Not all *erga omnes* obligations have the character of peremptory rules of international law.

(40) *The scope of Article 103 of the Charter of the United Nations*. Article 103 of the Charter provides for the priority of the obligations under the Charter *vis-à-vis* not only "any other international agreement" but also customary international law. The scope of Article 103 reaches not only to the Articles of the Charter but also to binding decisions made by United Nations bodies such as the Security Council or the International Court of Justice.

(41) *The relationship between hierarchy and fragmentation*. The purpose of normative hierarchies is to resolve conflicts between rules of international law by indicating which rule is to prevail in case of conflict. A hierarchy between two rules or norms operates in a relational and not fixed fashion. If there is a conflict between two hierarchically superior norms such as *jus cogens* and Article 103 of the Charter, their relationship can only be determined in a contextual fashion, bearing in mind, *inter alia*, the principle of harmonization, that is, that in the event of a *prima facie* conflict, the two norms should be interpreted as compatible.

(42) *The operation and effect of* jus cogens *norms and Article 103 of the Charter of the United Nations*.

(*a*) A rule conflicting with a norm of *jus cogens* becomes thereby *ipso facto* invalid;

(*b*) A rule conflicting with Article 103 of the Charter becomes inapplicable as a result of such conflict.

(43) *The principle of harmonization*. Irrespective of the special status or the designation ("fundamental") enjoyed by some norms, conflicts between rules of international law should be resolved in accordance with the principle of harmonization, that is, by bearing in mind that, in the event of a conflict, the norms should be interpreted as compatible to the extent possible. Hierarchical relations appear often in the context of other conflict resolution rules, such as those in article 30, paragraph 1, article 31, paragraph 3 (*c*), and article 41 of the 1969 Vienna Convention, or in applying the *lex specialis* or *lex posterior* principles.

Annex 12

NATCOM6 2023

Uruguay

Sixth National Communication

to the Conference of the Parties to the United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

Ministerio de Ambiente

SNRCC Uruguay

SIXTH NATIONAL COMMUNICATION
TO THE CONFERENCE OF THE PARTIES TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

2023

REPÚBLICA ORIENTAL DEL URUGUAY

The Sixth National Communication was prepared by the **Ministry of Environment (MA)** within the framework of the National Climate Change Response System (SNRCC)

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The following National Communication reports from November 2019 to October 2023 and includes the 2020 National Greenhouse Gas Inventory.

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CHAPTER 1

National Circumstances and Institutional Arrangements

1

Chapter 1 presents the national circumstances and institutional arrangements. The following is a brief summary of the contents of this chapter.

The Oriental Republic of Uruguay is located on the left bank of the Río de la Plata and the Uruguay River, bordered on the west by the Republic of Argentina, on the north and northeast by the Federative Republic of Brazil and on the east by the Atlantic Ocean. Uruguay is located approximately between parallels 30° and 35° south latitude and meridians 53° and 58° west longitude.

Uruguay has a republican, democratic and presidential form of government, with three branches of government: Executive, Legislative and Judicial. National and departmental authorities are renewed every five years through elections, which are held by means of mandatory secret ballot. The consolidation of the political system, citizen participation and pluralism are distinctive features that place Uruguay among the first eleven countries in the world with respect to measures of full democracy in 2022.

Uruguay's population is stable and relatively aged. The country exhibits an advanced demographic transition, involving a decrease in the number of children, an increase in the number of older adults and a tendency towards stabilization of its population structure.

The educational system has a strong State presence throughout the national territory, governed by the principles of free, secular and compulsory education at the initial, primary, secondary and higher education levels. The National Integrated Health System (SNIS), implemented in the country since 2007, has enabled the country to move towards universal coverage and the promotion of quality care, insofar as it provides healthcare to the population throughout the national territory, both through public and private services. As of September 2023, 84.40 % of Uruguay's population had been vaccinated against COVID-19 (at least one dose).

Uruguay's economy is based mainly on the agricultural and services sectors. Commodities continue to account for a very large share of the country's exports. Likewise, the country has gradually increased the services component in its production. The country's productive and export structure makes its economy particularly vulnerable to the adverse effects of climate change. Renewable energies accounted for 56 % of the primary energy matrix in 2022.

In terms of growth, Uruguay was strongly affected by the health crisis caused by the spread of COVID-19 during 2020 and 2021. In 2022, economic activity increased by 4.9 % with respect to 2021, a result that was partly linked to the recovery in activities that in 2021 were still affected, although to a lesser extent, by the economic situation associated with the health emergency caused by COVID-19.

Among the impacts of climate variability and change that affect the country are droughts with their consequent losses in the agricultural and livestock sector, cost overruns in energy and difficulties in the supply of drinking water; floods that affect public health and displaced people, damage to production and infrastructure; extreme coastal events that cause erosion, infrastructure damage and impact on tourism; strong storms that put the population at risk; cold/heat waves that affect human and animal health.

It should be noted that the country has incorporated the issue of climate change into its institutional framework at an early stage, ratifying the United Nations Framework Convention on Climate Change (UNFCCC), which was approved by Law No. 16,517 of 1994; the Kyoto Protocol, approved by Law No. 17,279 of 2000, and the Paris Agreement, ratified by Uruguay and approved by Law No. 19,439 of 2016.

The country has made significant efforts towards strengthening institutional capacity to reflect the climate change approach in the definition of public policies and in planning and management instruments. Through the creation and strengthening of institutional arrangements since 2009, the definition of a National Climate Change Policy in 2017, the approval of the Long Term Low Emission and Climate Resilient Development Strategy in 2021 and the presentation of the First and Second Nationally Determined Contributions (NDCs) in 2017 (Decree No. 310) and 2022 respectively, as well as the implementation of various sectoral policies, the country is moving towards a development path aimed at becoming a resilient and low-carbon country.

In 2020, the Ministry of Environment of Uruguay (MA) was created by Law No. 19,889, and as part of its structure, the Climate Change National Directorate (DINACC, *by its acronym in Spanish)* was created, which clearly and forcefully reflects the will to prioritize the environmental issue nationwide and the aspects of climate change and variability in particular.

The main area of inter-institutional coordination for planning the actions necessary for risk prevention, mitigation and adaptation to climate change continues to be the National Climate Change Response System (SNRCC, *by its acronym in Spanish*), created by Decree No. 238 of the Executive Branch in 2009.

National Greenhouse Gas Inventory

Chapter 2 presents the results of the 2020 National Greenhouse Gas Emissions Inventory (NGHGI), as well as a Comparative Study of the Country's Net Greenhouse Gas Emissions for 1990, 1994, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2017, 2018, 2019 and 2020.

The NGHGI was conducted following the Guidelines for the Preparation of national communications from Parties not included in Annex I to the Convention (Chapter III of the Annex to Decision 17/CP.8) and following the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. It comprises the entire country and includes carbon dioxide (CO_2) emissions and removals as well as methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) emissions.

Emission estimates for carbon monoxide (CO), non-methane volatile organic compounds (NMVOCs), nitrogen oxides (NOx) and sulfur dioxide (SO_2), as proposed in Chapter III of the Annex to Decision 17/CP.8, were also included. The 2019 European Monitoring and Evaluation Program Guidelines (2019 EMEP/EEA Guidelines) were used to estimate emissions of these gases.

The following national sectors are included in this NGHGI: Energy, Industrial Processes and Product Use (IPPU), Agriculture, Forestry and Other Land Use (AFOLU) and Waste.

The NGHGI is prepared within the framework of the SNRCC GHG Inventory Working Group. This Working Group was formally established on 24 June 2020 through Decree No.181/020.

Key categories were estimated by applying the 2006 IPCC Guidelines (Tier 1 and Tier 2 methods) and were evaluated by level and by trend. Uncertainties were estimated using the methodology and default parameters proposed in the 2006 IPCC Guidelines.

In 2020, net emissions were 26,546 Gg CO_2-eq GWP $_{100\ AR5}$, which accounts for 0.05 % of global anthropogenic GHG emissions. This estimation was calculated considering the 2020 global emissions value reported by the UN (54.4 Gt CO_2-eq). If the contribution of category 3.B Land is not considered, emissions were 36,436 Gg CO_2-eq GWP $_{100\ AR5}$.

Net CH_4 emissions expressed in Gg of CO_2-eq GWP $_{100\ AR5}$ and without considering category 3.B Land account for 59 % of total national emissions. Net N_2O emissions account

for 21 %, CO_2 emissions 19 % and HFCs, PFCs and SF_6, despite their high global warming potential, account for less than 1 % of total national emissions.

The AFOLU sector generated the largest contribution to total emissions (without considering category 3.B Land) with 75 %, followed by the Energy sector with 18 %, Waste with 5 % and finally the IPPU sector with 2 % of emissions.

The categories with the highest share of emissions, without considering category 3.B Land, were: Enteric Fermentation (AFOLU) with 52.0 % of national emissions, followed by Direct N_2O emissions from managed soils (AFOLU) with a contribution of 16.5 % of national emissions and Fuel Burning in Transport (Energy) with 10.0 % of national emissions.

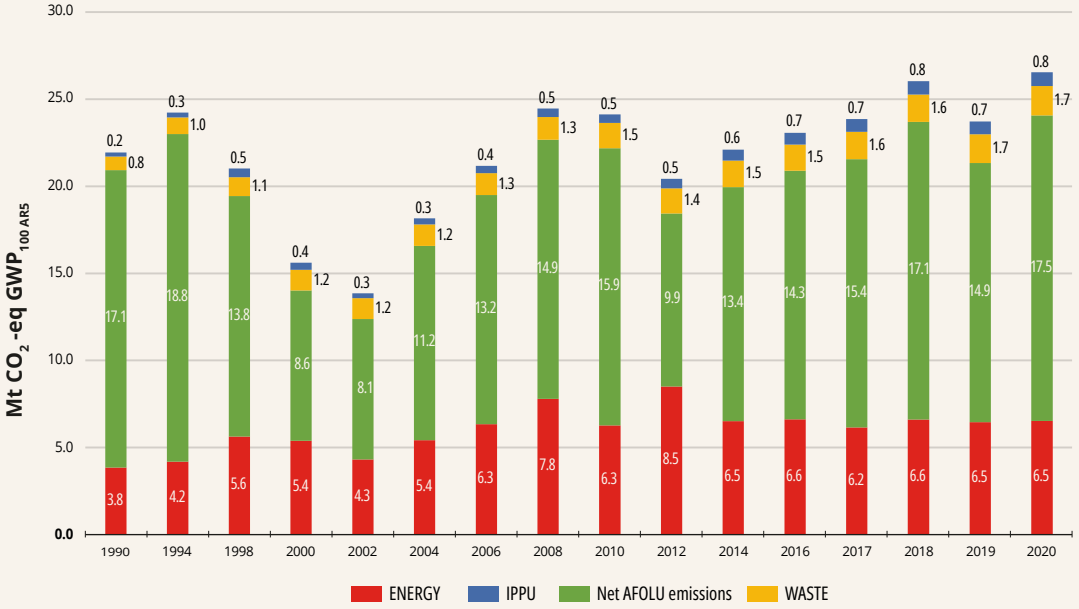
By 2020, net emissions from the AFOLU sector were 17,546 Gg CO_2-eq $GWP_{100\ AR5}$. These emissions increased by 21.0 % between 1990 and 2020 and by 11.9 % compared to 2019 under the $GWP_{100\ AR5}$ metric.

The main source of emissions throughout the series corresponded to the AFOLU sector, due to CH_4 emissions from enteric fermentation and N_2O in managed soils (without considering 3.B Land). Their relative weight to the national total depends on the metric used to determine the contribution to global warming.

Net CO_2 removals from the AFOLU sector increased significantly between 1990 and 2000 and then decreased. The increase in removals until 2000 was mainly explained by the increase in the area of commercial forest plantations for the sawmill and cellulose industry, which generated carbon sequestration in woody biomass and mulch and an increase in soil carbon stocks.

Since 2002, on the one hand, an increasing part of the plantations planted since the early 1990s began to be harvested and, on the other hand, the area of cropland increased in the 2000s, which increased emissions and led to a sustained fall in net removals until 2008. The increase in removals recorded in the latter period was mainly due to the increase in the area of forest plantations and, therefore, carbon sequestration in biomass, dead organic matter and soil organic matter in Forest Land.

FIGURE 1. Emissions evolution, 1990-2020, by sector, ($GWP_{100\ AR5}$).



For 2020, emissions of 6,523 Gg CO_2-eq GWP $_{100\ AR5}$ were estimated for the Energy sector, which accounts for an increase of 70% over the 1990 - 2020 series. CO_2 emissions from the Energy sector had a net increasing trend over the 1990-2020 period, with a significant variation for some years. Transportation has historically been the main sector responsible for CO_2 emissions, surpassed only by the Energy Industries category in years of low levels of hydro-electric power and its consequent higher consumption of fossil fuels for generation.

By 2020, IPPU sector emissions were 790 Gg CO_2-eq GWP $_{100\ AR5}$, with an increase of 230% in the 1990-2020 series. The variation in emissions from the IPPU sector is closely linked to the level of activity of the national manufacturing industry. As in other sectors, a historical minimum was recorded in 2002 due to the low activity resulting from the economic crisis. The main gas associated with the sector was CO_2 generated in cement production. In the last period there was an increase in the sector's emissions, associated with a growth in the level of activity and the increase in imports and consequent use of HFCs for refrigeration and air conditioning.

By 2020, Waste sector emissions were 1,687 Gg CO_2-eq GWP $_{100\ AR5}$, with an increase of 118% in the 1990-2020 series. The main GHG of the sector is CH_4 (>90%). The quality of information and activity data sources in this sector has improved and therefore has improved the estimation of emissions from the last inventories.

According to the IPCC Fifth Assessment Report, GWP is not directly related to a temperature limit, such as the 2 ºC target, while physical metrics of final effects such as GTP may be more suitable for this purpose.

In the case of Uruguay, the metric used has a strong impact on the contribution of CH_4 and thus on the relative weight of the AFOLU sector in total national emissions. For this reason, the 1990-2020 GHG inventory is presented using the GTP $_{100\ AR5}$ metric and the comparison against the results obtained with the GWP $_{100\ AR5}$ metric. By 2020, a difference in total national emissions of -74% is observed when switching from the GWP to

GTP metric, when category 3.B Land is included. If this category is not considered, the difference in total national emissions is -54%.

When comparing the relative contribution of each gas to total national emissions (without considering 3.B Land), the main gas under the $GWP_{100\ AR5}$ metric is CH_4 (59 %), while under the $GTP_{100\ AR5}$ metric the main emitting gases are CO_2 and N_2O (41 % each). CH_4 becomes the third largest emitting GHG (18 %).

Steps taken or envisaged to implement the Convention

3

Chapter 3 systematizes the public policies on climate change approved after the presentation of the Fifth National Communication, and presents the adaptation and mitigation measures, programs and projects implemented or being implemented. Some of the contents that are discussed in greater depth in the third chapter of this National Communication are highlighted below.

In 2020, the National Policy for Comprehensive Emergency and Disaster Risk Management in Uruguay (2019-2030) was approved by Decree No. 66.

During the year 2021, the Long Term Low Emission and Climate Resilient Development Strategy was prepared with the objective of agreeing and making explicit a country vision on GHG emissions and removals and adaptation, resilience and risk reduction towards 2050. In the same year, the Gender and Climate Change Action Plan was approved within the framework of the National Climate Change Response System (SNRCC, *by its acronym in Spanish*) with a 2024 perspective, and the National Action Strategy for Climate Empowerment was prepared.

In December 2022, Uruguay submitted its Second Nationally Determined Contribution (NDC2), in compliance with the Paris Agreement, which states that each country must communicate a NDC every five years. On the same date, Uruguay also submitted its Second Adaptation Communication.

During the reporting period, the first issuance in 2022 of a sovereign bond associated with environmental indicators that aligns the public financing strategy with national climate commitments (*Climate Change Index-linked Bond - BIICC*) stands out.

In terms of ***adaptation to climate change***, Uruguay continues to promote actions from different sectors, working together with several actors.

As of 2023, Uruguay has developed National Adaptation Plans in the Agricultural and Livestock, Coastal, Urban and Infrastructure sectors and is developing plans in the Energy and Health sectors.

In its First Nationally Determined Contribution (NDC1), Uruguay defined specific adaptation contributions, gearing its efforts towards the Global Goal on Adaptation under the Paris Agreement of increasing adaptation capacity, strengthening resilience and reducing vulnerability. The Second Nationally Determined Contribution (NDC2, 2030

as the time horizon), submitted in December 2022, sets out adaptation objectives and corresponding actions. In order to link national adaptation efforts with the elements established in the Global Goal on Adaptation (GGA), the Second Adaptation Communication (ADCOM2) has outlined general objectives and specific objectives for each adaptation area and, in addition, an effort has been made to establish the qualitative contribution of each of the proposed adaptation actions to the GGA, in order to establish a strategic framework for their implementation.

In relation to the adaptation measures, priority is given to the continuity of actions initiated in the First Adaptation Communication (ADCOM1) that require greater precision and/or moving to a subsequent stage, emphasizing the measures proposed in the National Adaptation Plans and reinforcing the needs found in some of the adaptation areas. In addition, social commitment, the risk reduction approach and the inclusion of the gender perspective are mainstreamed in all measures.

National Adaptation Plan to Climate Change and Climate Variability for the Agricultural and Livestock Sector (NAP- Ag). In 2022, the indicators matrix and the action plan were monitored. The exercise showed the need to strengthen statistics and indicators and the capacity to provide continuity to monitoring and verify that the indicators are reflecting the specificities of climate change adaptation in the agricultural and livestock sector. With respect to the 2025 action plan, the evaluation of the NAP-Ag identified some challenges.

National Adaptation Plan for Cities and Infrastructures (NAP-Cities). The plan lays the foundations for building adaptation capacity and resilience in urban centers, protecting fundamental and essential infrastructure and urban environments, facilitating the integration of adaptation to climate change in policies, programs and activities, with a focus on reducing existing and future risks in the face of socio-natural phenomena that may be triggered by climate change. Some of its main achievements and advances include the progress made in institutional processes such as the preparation of departmental plans for integrated risk management, climate action, rainwater and urban water drainage, and tree-planting plans and ordinances, among others. In terms of education and training, lines of work for research, teaching and extension related to adaptation to climate variability and change were promoted.

In addition, the inter-institutional work promoted by the national and departmental governments has made it possible to design a binational initiative for the Uruguay River, a territory that is particularly vulnerable to climate variability and change. This work concluded with the approval, in 2021, of the **Uruguay-Argentina Regional Program for Adaptation to climate change in vulnerable coastal cities and ecosystems of the Uruguay River** to reinforce the adaptation actions undertaken in the departments of Artigas, Salto, Paysandú, and Río Negro, on the left bank of the Uruguay River.

National Adaptation Plan for Coastal Areas (NAP-Coasts). The main goal of the NAP-Coasts focuses on strengthening the capacities of institutions to identify impacts and vulnerabilities to climate change and to strengthen the capacities of both government institutions and other stakeholders to define concrete adaptation strategies and actions in the coastal zone to address these impacts.

Chapter 3 delves into the progress made in the implementation of the NAP-Ag, NAP-Cities, and NAP-Coasts.

Significant progress has been made in the **management of urban floods** related to adverse climate events, in line with the goals set out in the NDC1.

In 2023, the first **National Plan for Comprehensive Emergency and Disaster Risk Management in Uruguay** was presented, which includes the cross-cutting axes that are present in the different actions of the National Emergency System (SINAE): the rights approach, the gender, generations and disability perspective, and the permanent commitment to comply with accessibility and transparency standards.

In terms of ***climate change mitigation***, the most outstanding accomplishment has been the decarbonization of the electricity matrix achieved in recent years through the incorporation of installed capacity in wind, biomass and solar photovoltaic energy, which together with hydroelectricity accounted for 91 % of the electricity generation in 2022. These actions, together with energy efficiency measures, address mitigation and adaptation to climate change in the energy sector within the framework of the National Energy Policy, in force since 2008, with a 2030 perspective, and in line with the National Climate Change Policy.

Chapter 3 provides more information on projects related to sustainable mobility (MOVÉS and NUMP).

In the agricultural and livestock sector, the project "**Climate-smart Livestock Production and Land Restoration in the Uruguayan Rangelands**" stands out. One of the most significant outcomes of the project was the preparation of a National Strategy for sustainable livestock production, which includes the submission to the UNFCCC of a Nationally Appropriate Mitigation Action (NAMA) that seeks financial support for its implementation. NAMAs are a UNFCCC instrument designed so that mitigation measures defined by developing countries can be submitted to the international community seeking technical or economic/financial support, but also measures already implemented can be submitted for international recognition only.

Also noteworthy is the formation of a technical working team to study the environmental footprint of livestock farming in Uruguay, whose work led to the development of unified methodologies and a set of indicators that were reflected as public goods in a document presented in 2022 for four environmental components: biodiversity, water, soil and air.

The actions related to native forests have a clear synergy between adaptation and mitigation, and therefore their relevance at the national level. In 2022 the country completed the first stage of the **Reducing Emissions from Deforestation and Forest Degradation** (REDD+) project.

With regard to the waste sector, strategies are being developed to improve waste management and recovery within the framework of the implementation of the National Waste Management Plan. Chapter 3 presents the main progress made to date under the National Waste Management Plan.

CHAPTER 4

Other information considered relevant to the achievement of the objective of the Convention

4

Uruguay continues to work on the quality, quantity and availability of information and data in order to improve decision making in the face of climate change and climate variability. Information systems have been designed as tools for the integration, analysis and dissemination of information, based on decentralization (networks, decentralized monitoring, State and private services); systematic and sustained monitoring; interoperability, integration and georeferencing of information.

In Uruguay, several institutions have information systems in place that contribute to decision-making for the planning and implementation of actions or measures for climate change adaptation and mitigation. The first section of chapter 4 refers to the main information systems and their progress.

These include the information provided by the Uruguayan Institute of Meteorology (INUMET) from a National Meteorological Network, the National Hydrological Observatory, the Territorial Information System (SIT), the National Environmental Observatory (OAN), the National Agricultural Information System (SNIA), the Information and Support System for Decision-Making in the Agricultural Sector (SISTD), the Geographic Information System (GIS), the Integrated Risk and Impact Monitor (MIRA), the Geographic Information System on adaptation to climate change in cities, and the System of Environmental and Economic Accounts (SCAE). The NDC1 Monitoring, Reporting and Verification System and the National Greenhouse Gas Inventory (NGHGI) Viewer are also mentioned.

Section 2 presents the main research and studies carried out during the period covered by the current National Communication (2020-2023). Some examples include the knowledge generated within the framework of: a) the development of the NAP-Coasts and NAP-Cities, b) the inter-institutional group of the Livestock Environmental Footprint and the "Climate-smart Livestock Production and Land Restoration in the Uruguayan Rangelands" project, c) the research carried out by INIA and, d) the topic of sustainable mobility.

Section 3 presents a summary of the institutional framework, the main management instruments and the progress made in the implementation of climate change issues in the country's education system, capacity building and citizen participation.

In this section, special reference is made to the National Action Strategy for Climate Empowerment (ENACE, *by its acronym in Spanish*) and the capacity building carried out in the framework of the implementation of the National Adaptation Plans, the elaboration of the Sustainable Mobility Policy, the execution of the Gender and Climate Change Action Plan and the UNDP Climate Promise initiative.

The main instances of citizen participation in the period corresponding to this National Communication are the processes related to the Long Term Low Emission and Climate Resilient Development Strategy, the NAP-Cities, the NAP-Coasts, the National Waste Management Plan (PNGR, *by its acronym in Spanish*), the National Action Strategy for Climate Empowerment (ENACE, *by its acronym in Spanish*) and the Second Nationally Determined Contribution (NDC2).

Section 4 refers to the different networks and working groups that have contributed, during the period of this National Communication, to the follow-up of the commitments arising from the Convention, the deepening of scientific knowledge, the strengthening of capacities and the implementation of adaptation and mitigation actions in the country.

Section 5 mentions the contributions from communication, with a focus on citizen empowerment, disseminating information and technical data in an accessible way, deepening on gender and climate change, launching the participation process for the elaboration of the Second Nationally Determined Contribution (NDC2) and elaborating a specific communication strategy for its dissemination. Section 5 also presents the main communication actions developed during the period of this National Communication.

Finally, Section 6 presents the information corresponding to the financial and technical support received by the country from non-reimbursable international cooperation for the development of initiatives related to the response to climate change. Note that in most of the international cooperation projects analyzed, the funds have a climate change component, i.e., they are not entirely earmarked for climate change activities.

Constrains and gaps, and related financial, technical and capacity needs

Uruguay must continue to implement a significant set of actions to adapt to climate change, which generates impacts on its territory, its economy and its people. The country is also pursuing voluntary mitigation actions in key sectors that will allow it to continue moving towards a low-carbon economy.

In order to implement the set of additional adaptation and mitigation actions identified, as well as for the sustainability of the existing ones, the country requires means of implementation to be provided by external sources, as well as specific capacities for their implementation.

Through a participatory process and analysis of key documents, a series of financing, technology and capacity gaps, needs and constrains have been identified.

In terms of adaptation, the sources of information considered were: ADCOM2 (which considers the main barriers and challenges based on the analysis of Uruguay's main adaptation instruments), the NAPs (Coasts, Cities and Agriculture) and the Long Term Low Emission and Climate Resilient Development Strategy. In addition, the information presented in the 5th National Communication, which considers a selection of NDC1 measures, was reviewed and updated.

In the case of mitigation, the information presented in the BUR 4 regarding NDC1 measures (conditional to additional and specific means of implementation) and the National Waste Management Plan was reviewed and updated.

In Sections 1 and 2 of the aforementioned chapter, gaps, needs and obstacles in financing, technology and capacity for adaptation and mitigation are listed, respectively.

On the other hand, Section 3 refers to the consultancy "Accelerating the implementation of Research, Development and Innovation (R&D&I) measures of Uruguay's NDC" (I. Bortagaray, 2022). This work identifies knowledge gaps in issues related to climate change.

Finally, the last section highlights the results of the "Virtual survey on gender capacity building needs" (consultation period 5-28 July) conducted within the framework of the National Gender Council.

SIXTH NATIONAL COMMUNICATION
TO THE CONFERENCE OF THE PARTIES TO THE UNITED NATIONS
FRAMEWORK CONVENTION ON CLIMATE CHANGE

2023

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Sixth National Communication

to the Conference of the Parties to the United Nations Framework Convention on Climate Change

Ministerio de Ambiente

SNRCC Uruguay

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Steps taken or envisaged to implement the Convention

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National circumstances and institutional arrangements

1. General characterization

FIGURE 1. National circumstances.

Official Name	**Oriental Republic of Uruguay**
Location geographic	Southeastern South America, bordering Argentina and Brazil.
Surface area	176,215 km2 of land area; 95 % of the land surface of the territory is productive land suitable for agricultural and livestock uses. 142,198 km2 of territorial sea, islands and jurisdictional waters of bordering rivers and lagoons.
Form of government	Democratic Republic with a presidential system
Population	3,543,026 inhabitants (2021)
Composition of the population by sex	48.5 % men and 51.5 % women (2021)
Vulnerability to climate change	Uruguay is a country with low-lying coastal areas exposed to rising sea levels, fragile ecosystems such as certain agroecosystems that are subject to periodic droughts, and urban areas that are affected by floods and other extreme events, such as tornadoes, high winds and heavy rainfall.

NOTE: TOTAL ESTIMATED AND PROJECTED POPULATION 2021. **SOURCE:** STATISTICAL YEARBOOK (INE, 2022).

1.1. Geography and Territory

The Oriental Republic of Uruguay is located on the left bank of the Río de la Plata and the Uruguay River, bordered on the west by the Republic of Argentina, on the north and northeast by the Federative Republic of Brazil and on the east by the Atlantic Ocean. It is located approximately between parallels 30° and 35° south latitude and meridians 53° and 58° west longitude.

Uruguay has a land area of 176,215 km2 and 142,198 km2 of territorial sea, islands and jurisdictional waters of bordering rivers and lagoons and is, considering its surface area, the second smallest country in South America. It has a temperate to subtropical climate and significant biodiversity, both eco-regional and ecosystemic.

temic, specific and genetic. It has an important diversity of environments, which include extensive grasslands, highlands, different forest associations, rivers, lagoons, wetlands and coasts[1].

Natural grasslands are the only biome (climatically defined) in Uruguay, they comprise 51% of the national territory and are part of the Río de la Plata grasslands, one of the areas with the greatest diversity of native grasses in the world. These are habitat for almost 300 priority species for conservation in Uruguay, 55% of the mammals and 19% of the priority birds for conservation in Uruguay depend on the grasslands.

The native forest covers about 4.84% of the national territory and, according to the plant associations and their adaptation to different environmental conditions, they are organized as: riparian, mountain, ravine, park, psamophilous (coastal) and palm groves[2] .

According to the **National Inventory of Wetlands**, 143,875 ha is the area occupied lakes and lagoons, and 703,368ha is the area of permanent and temporary wetlands. such as the Bañados del Este, the Esteros de Farrapos and the Esteros del Queguay and those of the river
St. Lucia.

Uruguay's surface water resources are grouped in a vast hydrographic network distributed in three transboundary macro-basins: Uruguay River, Laguna Merín, and Río de la Plata and its Maritime Front. It also has a vast network of sub-terrestrial waters that give it a wealth of water distributed throughout the national territory[3] .

The marine surface, more than 208,000 ha, formed by the estuary of the Río de la Plata, the shelf and the slope adjacent to the Atlantic Ocean, constitutes an extensive ecotone of high biological diversity.

The Uruguayan coastal zone has an extension of 714 km, of which 478 km correspond to the Río de la Plata and the remaining 236 km to the Atlantic Ocean[4]. The coastal ecosystems distributed along the coastlines of the Río de la Plata and the Atlantic Ocean are heavily intervened and modified due to urbanization, port construction, and the use of seaside resorts for tourism.

Within this framework, the country's natural heritage, represented by its ecosystemic variety, its biodiversity and its water wealth distributed throughout the national territory, represents an opportunity to develop adaptation strategies with mitigation benefits, based on ecosystem conservation.

1 MVOTMA (2012): *Educating for conservation with female teachers in mind*, Coord. Calixto, G.
2 MGAP - OPYPA (2022): *OPYPA Yearbook* General Directorate of Forestry. Evaluation and Information Division. National Cartography nal Forestal Forestal Bosque Nativo - Year 2021.
3 Available here.
4 Gómez Erache M. (2021) *Lessons learned and risk management best practices from a local community perspective. Uruguay*. In- tergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) and Directorate-General for Maritime Affairs and Fisheries of the European Commission (DG MARE) 28 pp, Sent October 2020.

1.2. Political-administrative organization

Uruguay has a republican, democratic and presidential form of government, with division into three branches: Executive, Legislative and Judicial. The administrative division of the territory is 19 departments and 125 municipal governments. The renewal of national and departmental authorities is carried out every five years through elections, which are implemented through mandatory secret ballot.

The consolidation of the political system, Citizen participation and pluralism are distinctive features that place Uruguay among the first eleven countries in the world with respect to measures of full democracy in the year [20225]. In March 2020, the government elected in 2019 took office.
new national authorities, the new national They stated that environmental issues are among their priorities and maintain the commitments assumed at the international [level6].

This has allowed the development of national policies and, in particular, those that contribute to reducing the impacts of climate change and variability at the local level.

In the Human Development Report 2021-2022, prepared by the United Nations, the Human Development Index (HDI) ranked Uruguay in 58th place (0.809) out of 191 countries, which places it among the most developed in Latin America. The average annual growth of the HDI between 1990 and 2021 was 0.46%. The 2021 Gender Inequality Index (0.235) ranked the country 58th out of 191 countries, although marked differences persist in access to the labor market and decision-making spheres.

Positioning Uruguay at the international level

Rule of Law *(Rule of Law Index* 2022)[1]: Uruguay ranks first in Latin America and 25th worldwide (140 countries).

Democracy Index (2022)[2]:
Uruguay is the first full democracy in Latin America and ranks 11th out of 24 full democracies in the world.

Global Open Data Index (Global Open Data Index - 2016-2017)[3]:
In 2015, Uruguay ranked 19th out of 94 countries. countries analyzed.

Corruption Perception Index (2022)[4]:
Uruguay ranks 14th out of 180 countries and ranks first in Latin America as a trustworthy country with the lowest corruption indexes.

Human Development Index (2021-2022)[5]:
Uruguay ranked 58th out of 191 countries, with an index of 0.809.

Global Social Mobility Index [20206]:
Uruguay is ranked first in Latin America and the Caribbean in the
35th place worldwide (82 countries).

Civil Liberties [20227]:
Uruguay is ranked first in Latin America and the Caribbean in the
8th place worldwide (210 countries).

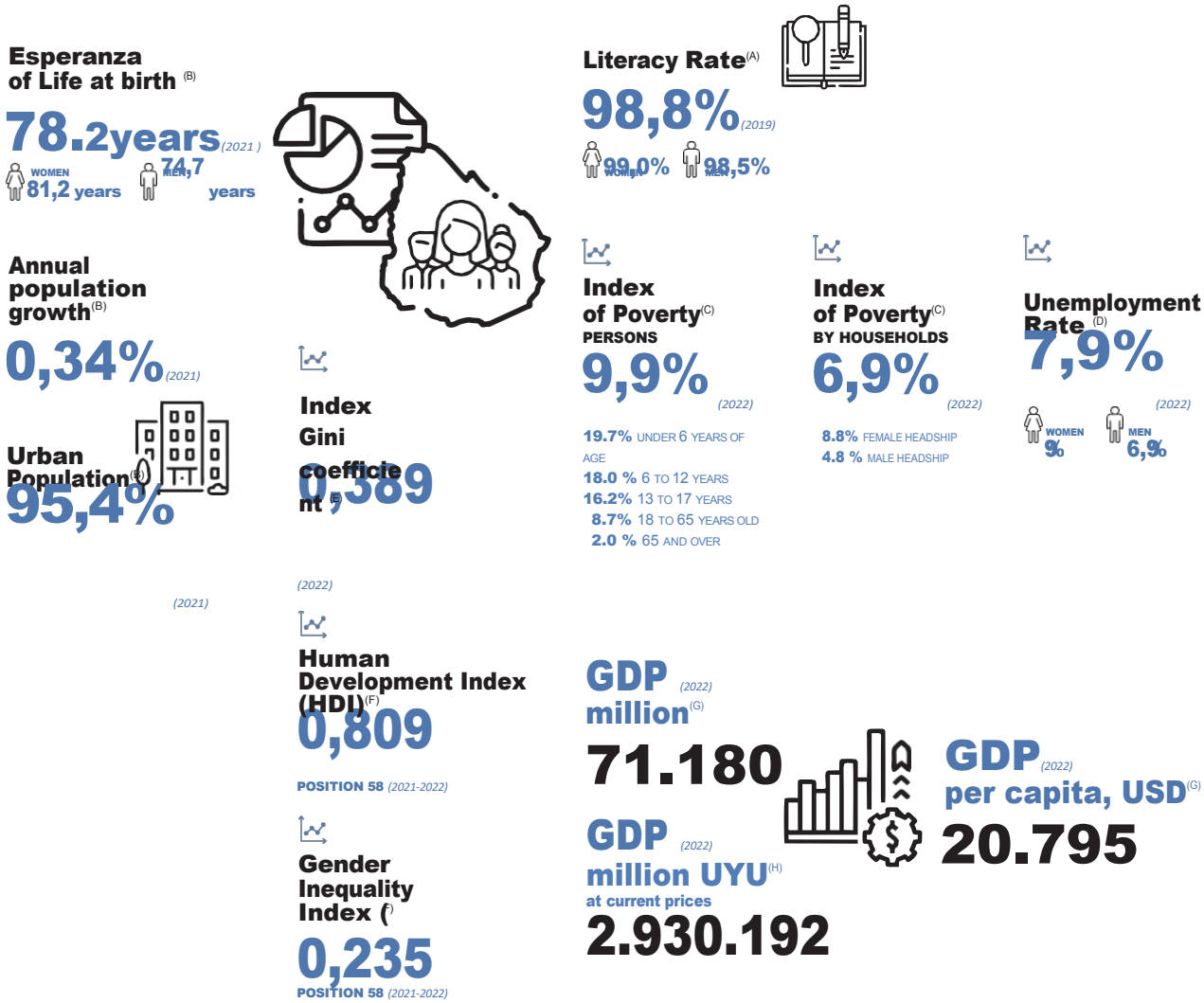
E-government Development Index [20228]: Uruguay ranks first in Latin America and 35th worldwide (193 countries).

1 Source: *The World Justice Project*. Available here.
2 Source: *The Economist Intelligence Unit*. Available here.
3 Source: Available here.
Note: The methodology used in the Global Open Data Index has changed over time; significantly between 2015 and 2016. For this reason, the results are not directly comparable over time.
4 Source: Transparency International. Available here.
5 Source: United Nations. Available here.
6 Source: World Economic Forum. Available here.
7 Source: *Freedom House*. Available here.
8 Source: United Nations. Available here.

5 Available here.
6 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*

1.3. Social and economic characterization

FIGURE 2. Indicators.



(A) SOURCE: OBSERVATORIO TERRITORIO URUGUAY OPP HTTPS://OTU.OPP.GUB.UY. LATEST DATA 2019. (B) SOURCE: NATIONAL STATISTICS INSTITUTE (INE) (2022): NATIONAL STATISTICAL YEARBOOK 2022.
(C) SOURCE: INE. AVAILABLE HERE. (D) SOURCE: INE. AVAILABLE HERE.(E) SOURCE: INE. AVAILABLE HERE. (F) UNITED NATIONS DEVELOPMENT PROGRAM (UNDP) (2022): HUMAN DEVELOPMENT REPORT 2021-2022.
(G) SOURCE: WORLD BANK. AVAILABLE HERE. (H) SOURCE: CENTRAL BANK OF URUGUAY (BCU). AVAILABLE HERE

1.3.1. Social characterization

Uruguay's population, stable and relatively aged, is 3,543,026 inhabitants, according to estimates and projections of the National Institute of Statistics (INE) for the year 2021.[7] The population of Uruguay has an advanced demographic transition, which implies a decrease in the number of children, an increase in the number of older adults, and a tendency toward stabilization of its population structure. Uruguay is undergoing an advanced demographic transition, which implies a decrease in the number of children, an increase in the number of older adults, and a tendency toward stabilization of its population structure. This process is generated by three phenomena: an increase in life expectancy, a decrease in mortality at all ages, and a reduction in fertility[8] .

Uruguay is also characterized by an unequal distribution of the population in the national territory between rural and urban areas. A total of 95.4% of the population lives in urban areas and the growing trend towards urbanization continues[9].

7 INE (2022): *Anuario Estadístico Nacional 2022.*
8 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*
9 INE (2022): *Anuario Estadístico Nacional 2022*.

The country's capital, Montevideo, is the largest city, with 1,304,729 inhabitants. There are also 8 other cities with more than 50,000 inhabitants, 31 cities with between 10,000 and 49,999 inhabitants, and 30 cities with between 5,000 and 9,999 inhabitants[10].

From an ethnic and racial point of view, the Uruguayan population is mainly of indigenous origin European gene, but 8% of the population believes they are of Afro-descent and 5% of the population believes they are indigenous[11].

In terms of poverty, the total number of households below the poverty line reached 6.9% in 2022, which translates into 9.9% of the population living in poverty.

The incidence of poverty presents a heterogeneous distribution in the national territory. For the year 2022, the highest values are registered in the departments of Cerro Largo, Rivera, Montevideo and Treinta y Tres. On the other hand, the lowest levels correspond to the departments of Flores, San José and Colonia. Territorial heterogeneity is also observed when focusing the analysis on the country's capital, with the highest levels of poverty being recorded in the provinces, while the lowest levels are in the departments of Flores, San José and Colonia.
percentages of poor households are registered in the southeastern coast of the department[12].

In turn, the infantilization of poverty is one of the greatest challenges to reducing inequalities[13].

Regarding the education system, Law No. 18,437 of 2008 (General Education Law) defined a National Public Education System (SNEP) as a set of integrated and articulated educational proposals for all the inhabitants of the country, throughout life. In Law No. 19.889 of 2020, this system is now called the National Education System and involves both public and private educational institutions.

In 2005, the National Network of Environmental Education for Sustainable Human Development[14] (ReNEA) was created as an inter-institutional space for permanent construction and integrated by governmental, civil society and formal education organizations whose common axis is environmental education.

The educational system is characterized by a strong state presence throughout the country, governed by the principles of free, secular and compulsory education at the pre-school, primary, middle school and higher education levels. Formal education is organized in five levels: Initial Education (Level 0), Primary Education (Level 1), Secondary Education (Levels 2 and 3 as Basic Secondary Education and Higher Secondary Education - which includes General Education, Technological Education and Technical Professional Education) and Tertiary Education (Level 4, which includes Non-University Tertiary Education, Education Training and University Tertiary Education).

10 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*
11 Based on 2011 census. INE (2022): *Anuario Estadístico Nacional 2022*.
12 Available here.
13 Presidency of the Oriental Republic of Uruguay (2021): *Voluntary National Report on the Sustainable Development Goals 2021.*
14 For its organization it has the National Directorate of Education of the MEC as focal point; UDELAR, ANEP, MA and MEC as co-convening institutions; a Coordinator currently represented by UDELAR; a Technical Academic Coordinating Group (GCTA) and an annual Assembly with the participation of all member institutions.

In 2019, literacy reached 98.8%, with 99.0% for women and 98.5% for men.
in men[15].

With respect to basic services, Uruguay is the only country in Latin America that has practically universal access to drinking water, sanitation and electricity for the nucleated population and implements actions to provide full coverage to the population dispersed in different areas of the national territory. It should also be noted that these services are provided by the public sector[16].

Access to drinking water has been enshrined in Article 47 of the Constitution of the Republic as a fundamental human right and the supply of drinking water to the population is the main priority in the use of water resources. With respect to drinking water coverage, by 2020 it was 99%, supplied by the public company Obras Sanitarias del Estado (OSE), which provides the service on a continuous basis. The current challenges relate to preserving its traditional high quality, land-use planning around surface water reservoirs, hydrological management of water resources, and the management of the water supply.
algae rations and care of deep aquifers[17]. The Regulatory Unit of
Energy and Water Services (URSEA), as the regulatory agency, monitors and controls the quality of the water service.

OSE is the agency responsible for sewerage sanitation services throughout Uruguay, with the exception of Montevideo, where the service is the responsibility of the Departmental Municipality. Through more than 360,701 connections, 51% of the population currently has access to the service[18]. Sanitation coverage, including collective systems without treatment and individual installations (such as septic tank and/or impermeable well), reaches 98.8 % of the population[19].

The total electrification rate (percentage of dwellings with electricity as a percentage of total occupied dwellings) increased from 79% to 99.8% between 1975 and 2017 and remained constant until 2019. In 2022, the total electrification rate increased to 99.9% (100% urban and 99.6% rural)[20].

Telecommunications services have a wide national coverage, among which the most demanded are fixed and mobile telephony, Internet and television services for subscribers. The country has the highest fixed and cellular telephony teledensity in Latin America (98 lines per 100 inhabitants) and 100% of telecommunications are digitalized[21].

In Uruguay, approximately nine out of every ten adults have access to the Internet. This added to the fact that both Internet access and device ownership have increased significantly in lower-income households as a result of the deployment of the Ceibal Plan. For the purposes of an emergency situation, it is important to note

the following

15 Observatorio Territorio Uruguay OPP. Available here.
16 Presidency of the Oriental Republic of Uruguay (2021): *Voluntary National Report on the Sustainable Development Goals 2021*.
17 Presidency of the Oriental Republic of Uruguay (2021): *Voluntary National Report on the Sustainable Development Goals 2021*.
18 Available here.
19 SNRCC (2019): *Fifth National Communication to the Conference of the Parties to the Framework Convention on Climate Change.*
20 MIEM (2023): *National Energy Balance 2022.*
21 SNRCC (2019): *Fifth National Communication to the Conference of the Parties to the Framework Convention on Climate Change.*

It should be noted that seven out of ten households have non-cellular digital devices, an infrastructure that allows more sophisticated tasks to be performed than can be done on mobile phones[22].

The aforementioned represents an advantage when thinking about climate information systems, early warnings, response strategies and care for the vulnerable population in the event of severe climate events.

1.3.2. Economic characterization

Uruguay has an open economy, which is a key factor for the country's development, given its small population and the consequent limitations of the domestic market. Its strategic position in the southern cone of the continent favors regional integration, as a link between its two large neighbors and a gateway to the countries of the La Plata Basin, while at the same time favoring communication with the rest of the world.
across the Atlantic Ocean.

Uruguay's economy is based primarily on agriculture and services. Livestock farming is one of the most important economic activities in the country, with cattle and sheep as the main productive systems. In agriculture, cereal crops such as wheat, corn, rice, soybeans and barley predominate. The main industries are meat, dairy, cellulose, wood, alcohol, cement and hydrocarbon refining. Raw products (meat, soybeans, dairy products, rice and cellulose) continue to have a very high weight in the country's exports.

The country has also gradually increased the services component of its production, including tourism, transportation, logistics, information and communication technologies, and financial services.

The country's productive and export structure makes its economy particularly vulnerable to the adverse effects of climate change.

In terms of growth, as was the case in most countries, Uruguay was strongly affected by the health crisis caused by the spread of COVID-19 during 2020 and 2021. In 2020, the fall in Gross Domestic Product (GDP) was generalized among all sectors of activity; the economy contracted 6.3% in 2020 with respect to the previous year, after 17 consecutive years of economic growth (with the exception of Construction, which grew 2%, mainly as a result of the construction of the third cellulose production plant, the central railroad and related works). The activities of Trade, Accommodation and Food and Beverage Supply and Health, Education, Real Estate Activities and Other Services were the most affected by the pandemic, accounting for a large part of the contraction in economic activity during 2020. Signs of recovery were observed in 2021, with economic growth of 5.3 %[23].

22 Presidency of the Oriental Republic of Uruguay (2021): *Voluntary National Report on the Sustainable Development Goals 2021*.
23 Available here.

In 2022, economic activity increased 4.9 % with respect to 2021, a result that was partly linked to the recovery in activities that in 2021 were still affected, although to a lesser extent, by the economic situation associated with the COVID-1924 health emergency. Although GDP grew on average for the year in 2022, the last two quarters were down (in seasonally adjusted terms). This decline was marked by the impact of the most severe drought of the last century, both in terms of duration and severity.

From the production perspective, the positive impact of the following sectors stands out: Health, Education, Real Estate Activities and Other Services, Commerce, Accommodation and Food and Beverage Supply, and Transportation and Storage, Information and Communications. The positive result in Commerce, Accommodation and Food and Beverage Supply was influenced by the reduced restrictions on mobility associated with the sanitary emergency, as well as the reopening of borders for tourism. Likewise, only two sectors showed an annual drop in 2022: the agricultural sector and the food and beverage sector.
public administration activities.

TABLE 1. GDP by industry. Interannual variation of the Annual Physical Volume Index (%).

	Variation 2019-2020	Variation 2020-2021	Variation 2021-2022	Impact 2021-2022
Agriculture, Fishing and Mining	-6,0 %	13,4 %	-2,P %	-0,2
Manufacturing industry	-5,7 %	7,6 %	0,1 %	0,0
Electricity, Gas and Water	-8,5 %	5,8 %	0,4 %	0,0
Construction	2,0 %	6,0 %	7,0 %	0,3
Trade, Accommodation and Food and beverage supply	-8,6 %	7,8 %	10,4 %	1,3
Transportation and storage, Information and Communication.	-7,P %	0,8 %	P,7 %	0,9
Financial Services	-0,3 %	5,8 %	2,7 %	0,1
Professional Activities and Leasing	-6,2 %	8,1 %	6,2 %	0,5
Public administration activities	-0,6 %	0,1 %	-1,1 %	-0,1
Health, Education, Real Estate and Other Services	-8,8 %	2,6 %	5,6 %	1,4
ADDED VALUE at basic prices	-6,5 %	5,3 %	4,7 %	4,2
Taxes minus product subsidies	-4,7 %	5,3 %	6,4 %	0,7
GROSS DOMESTIC PRODUCT	**-&,S %**	**5,S %**	**4,9 %**	**4,9**

SOURCE: BCU. AVAILABLE HERE. TABLES AVAILABLE HERE.

From the demand side, the growth of economic activity in 2022 is associated with an increase in both domestic and external demand. Final consumption expenditure increased, due to growth in Household Final Consumption Expenditure and to a lesser extent in Government and NPISH (private non-profit institutions serving households) Final Consumption Expenditure. Gross capital formation increased as a result of higher gross fixed capital formation. The growth in external demand is reflected in an increase in the physical volume of exports of goods and services of 11.1 %, while imports of goods and services grew at a year-on-year rate of 12.5 %, in both cases as a result of increases in both goods and services.

24 Available here.

TABLE 2. GDP by expenditure component. Interannual variation of the Annual Physical Volume Index (%).

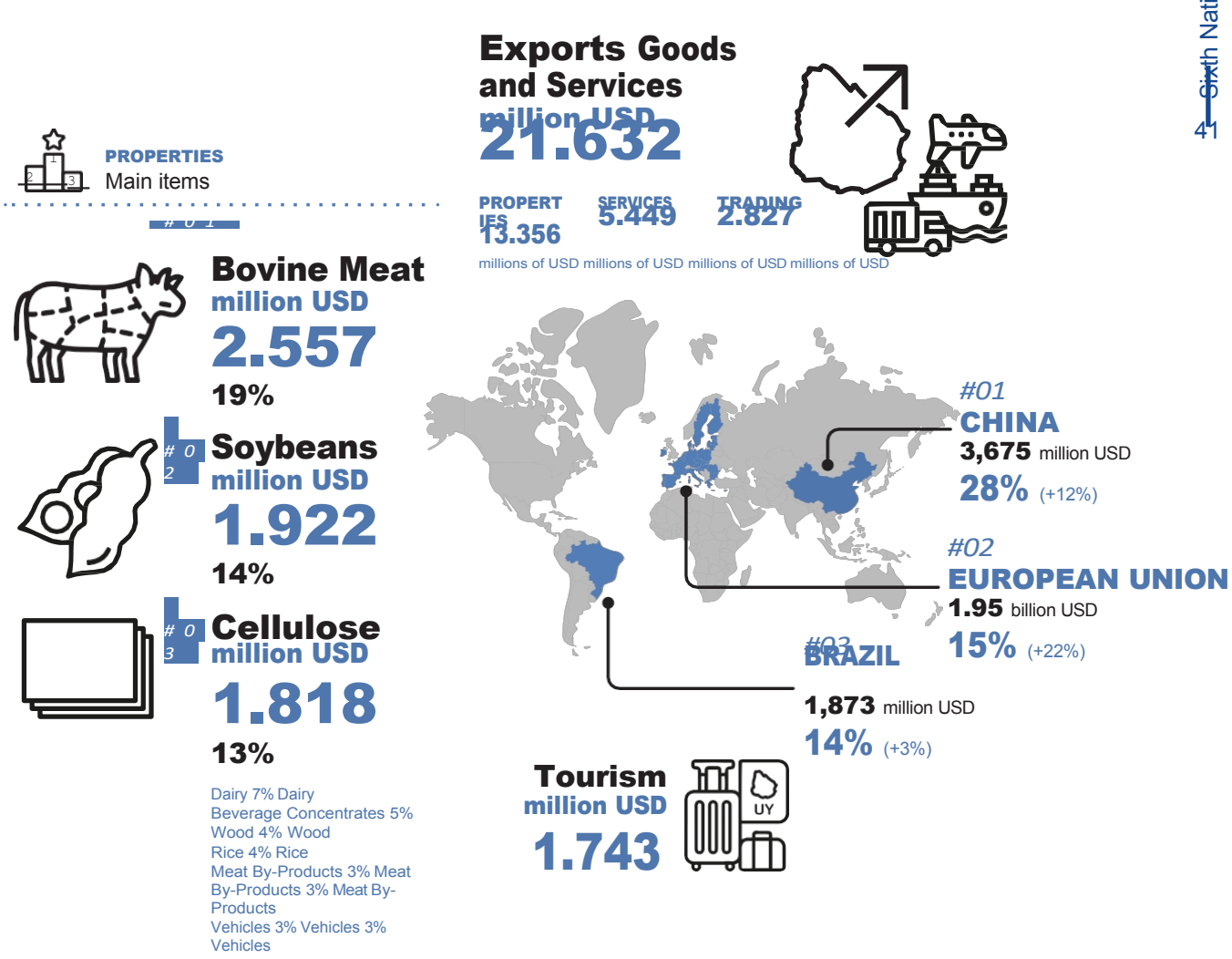
	Variation 2019-2020	Variation 2020-2021	Variation 2021-2022	Impact 2021-2022
Final ConsUMPtUre GaSt	**-&,9 %**	**4,0 %**	**5,0 %**	**4,0**
Homes	-6,8 %	2,P %	6,0 %	3,7
Government and NPISH	-7,1 %	8,4 %	1,6 %	0,3
Gross Capital Formation	**7,7 %**	**18,S %**	**5,2 %**	**1,0**
Gross Fixed Capital Formation	1,2 %	16,5 %	P,5 %	1,7
Exports of goods and services	**-1&,S %**	**11,7 %**	**11,1 %**	**3,0**
(-) Imports of goods and services	**-12,2 %**	**18,2 %**	**12,5 %**	**-3,0**
GROSS DOMESTIC PRODUCT	**-&,S %**	**5,S %**	**4,9 %**	**4,9**

SOURCE: BCU. AVAILABLE HERE. TABLES AVAILABLE HERE.

Exports[25]

Uruguayan exports of goods and services totaled USD 21.632 billion in 2022. In turn, Uruguayan exports of goods reached a historical record in 2022, after surpassing the maximum levels of 2021, totaling USD 13,356 million in 2022. On the other hand, services exports showed a strong recovery with respect to 2021, reaching USD 5,449 million in 2022, and trading activities fell significantly with respect to 2021, totaling USD 2,827 million in 2022.

FIGURE 3. Exports.



25 Based on the following sources of information: Uruguay XXI (2023): *Annual Foreign Trade Report 2022 and* Uruguay XXI (2023): *Services Exports Report 2022*.

The ranking of exported products is led by beef, with a 19 % share of total exports, soybeans, with a 14 % share, occupies second place, and cellulose is in third place with a 13 % share. It is followed by dairy products (7 %), beverage concentrate (5 %), wood (4 %), rice (4 %), meat by-products (3 %) and vehicles (3 %).

TABLE 3. Exports of goods from Uruguay.

Product	2021 million USD	2022 million USD	Variation
Beef	2.444	2.557	5 %
Soybeans	892	1.922	116 %
Cellulose	1.576	1.818	15 %
Dairy products	735	889	21 %
Beverage concentrates	619	678	10 %
Wood	569	560	-1 %
Rice	382	501	31 %
Meat by-products	469	460	-2 %
Vehicles	167	394	136 %
Plastics	265	315	1P %

SOURCE: ANNUAL FOREIGN TRADE REPORT 2022. URUGUAY XXI.

Regarding the main export destinations, China continued to be the top export destination, despite the fact that placements to this destination grew at a slower rate than in 2021. Exports to China increased 12 % in 2022 and reached USD 3,675 million, representing 28 % of total exports. The European Union was the second destination for Uruguayan exports. Sales to the bloc grew 22 % and reached USD 1.95 billion. Brazil was the third largest export destination. Sales to this country amounted to USD 1,873 million, 3 % above their value in 2021.

The year 2022 was an exceptional year for Uruguayan exports of goods; however, from the second half of the year onwards, external conditions deteriorated rapidly, with a negative impact on the prices of the main goods exported by Uruguay. In this regard, an even greater slowdown is expected in 2023 as growth in the main trading partners weakens, financial conditions tighten and commodity prices fall. It is estimated that in 2023 Uruguayan exports of goods will total almost USD 13 billion, which would imply a slight reduction of 2% in exported values.

TABLE 4. Exports of goods from Uruguay. Outlook 2023.

Product	million USD	Variation
Beef	2.362	-7 %
Cellulose	2.606	50 %
Soybeans	1.174	-3P %
Dairy products	763	-13 %
Wood and wood products	560	2 %
Rice	486	-2 %
Malta	264	-10 %
Meat by-products	442	-3 %
Other agricultural products	1.406	-3
Beverage concentrate	699	3 %
Pharmaceuticals	315	5 %
Others	1.743	-2 %
Subtotal (without electricity)	**12.810**	**-2 %**
Electric power	174	0 %
Total	**12.985**	**-2 %**

SOURCE: ANNUAL FOREIGN TRADE REPORT 2022. URUGUAY XXI

Meanwhile, services exports in Uruguay evolved in a similar way to world trade. After more than a year with closed borders (between March 2020 and November 2021), tourism exports recovered in 2022. Unlike what happened in the world, non-traditional services exports in Uruguay continued to grow steadily in 2022, significantly affecting the total variation in services sales to the rest of the world.

Exports of services showed a great dynamism in 2022 with respect to the previous year, totaling USD 5,449 million (47% growth with respect to the previous year). This is mainly explained by the recovery of the tourism sector with respect to the 2020-2021 biennium, which was strongly affected by the confinement and border closure measures resulting from the pandemic. The value observed in 2022 is below pre-pandemic records. In 2022, tourism exports were recorded at USD 1,743 million, tripling the value of 2021, but 23% below that recorded in [201926].

26 Uruguay XXI (2023): *Services Exports Report 2022*.

Non-traditional services were resilient to the crisis, with a smaller decline in 2020 and a more dynamic recovery in 2021. Likewise, exports in 2022 were 15% above sales in 2021. Global export services grew 15 % in 2022, totaling USD 2,902 million, 22 % higher than in [201927].

TABLE 5. Exports of services from Uruguay (millions of USD).

Service category	2020	2021	2022
Traditional services	**1.444**	**1.049**	**2.406**
Travel	1.055	541	1.743
Transportation	389	508	663
Non-traditional services	**2.278**	**2.649**	**3.044**
Global Services	2.150	2.518	2.902
Other non-traditional	128	131	142
Total services	**3.722**	**3.699**	**5.449**

SOURCE: REPORT ON SERVICES EXPORTS 2022. URUGUAY XXI.

The significant drop in output in 2020 resulted in an increase of poverty in the country. Inequality also increased, although the Gini index (0.387 in 2020, 0.386 in 2021 and 0.389 in 2022) continues to show Uruguay as the most equitable country in Latin America. In this context, economic measures were taken to mitigate the impact of the crisis, particularly on the most disadvantaged socioeconomic sectors.

Foreign Direct Investment (FDI) received in Uruguay was USD 1,403 million. in 2021, which represented a significant increase compared to [202028].

1.3.3. Employment and Income

In terms of employment at the national level in 2022, the activity rate was 61.9%, the employment rate was 57.1% and the unemployment rate was 7.9%.

TABLE 6. Employment indicators.

Indicators (%)	2019	2020	2021	2022
Activity rate	62,2	60,5	61,8	61,9
Employment rate	56,7	54,3	56,0	57,1
Unemployment rate	8,9	10,4	9,3	7,9

SOURCE: INSTITUTO NACIONAL DE ESTADÍSTICA (INE) - ENCUESTA CONTINUA DE HOGARES (ECH). AVAILABLE HERE.

TABLE 7. Average Wage Index, by year, by sector - Base July 2008=100 annual variation.

	2019	2020	2021	2022
Average Wage Index	8,49	7,75	6,28	9,41
Salaries and compensation Private Sector	7,72	6,96	6,50	9,62
Public Sector Salaries and Compensation	9,93	9,18	5,88	9,04

SOURCE: INE. AVAILABLE HERE.

TABLE 8. Average Real Wage Index, by year, by sector - Base July 2008=100.

	2019	2020	2021	2022
Average Real Wage Index	-0,27	-1,52	-1,56	1,03
Salaries and compensation Private Sector	-0,98	-2,25	-1,35	1,22
Public Sector Salaries and Compensation	1,04	-0,22	-1,92	0,68

SOURCE: INE. AVAILABLE HERE.

27 Uruguay XXI (2023): *Services Exports Report 2022*.
28 Uruguay XXI (2022): *Foreign Direct Investment in Uruguay*.

1.4. Climate[29]

1.4.1. Characterization

Uruguay is located entirely in the temperate zone and is geographically located in a region of great climatic variability on all time scales, with an average annual temperature of 17.5ºC, ranging from around 20ºC in the northeast to around 16ºC on the Atlantic coast. This average has increased by about 0.8ºC in the last 65 years, with greater warming in the eastern zone in all seasons[30].

Uruguay's climate shares characteristics with the southeastern region of South America and the climatic conditions of our region depend on factors that go beyond these geographical limits. The distribution of rainfall during spring, summer and autumn is latitudinal, with higher records in the north, where they reach values of 400 mm, while in the south the records are closer to 300 mm. Duran-
In the winter, rainfall distribution is longitudinal with higher values to the east (more than and less in the west of the country, where the accumulated rainfall is around 200 mm. Uruguay has a positive annual balance (precipitation-evaporation), i.e., it rains more than it evaporates, so lateral transport of moisture is necessary to maintain rainfall. As for the seasons, this positive balance is valid for all except summer, when evaporation exceeds rainfall[31].

The average winds in our country depend on the position of the semi-permanent anticyclone of the South Atlantic. During summer, autumn and spring, easterly winds prevail throughout the country. In winter, the entrance of the South Atlantic anticyclone to the continent generates winds with an easterly component to the north and west to the south of the country. The quarterly average winds are relatively weak with intensities close to 4 knots (7.2 km/h), as they are the average of the daily winds that have different directions and intensities[32].

During the summer, temperatures in the northern region reach temperatures comparable to those of tropical regions, while winter is a season of frequent transient cyclones and anticyclones (5-7 days in duration) with warm and cold fronts that move latitudinally, causing damage to infrastructure and property along the coastal zone[33].

Unlike temperature, in the case of precipitation, year-to-year variability is very significant, with maximums in the north of the country during summer and autumn. In summer, the northwest coast has typical standard deviations close to 200 mm, that is,

29 This section was mainly based on the following documents: (a) Second Nationally Determined Contribution to the Paris Agreement (SNRCC, 2022), (b) National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Ciudades, SNRCC, 2021), c) National Adaptation Plan for the Coastal Zone in the face of climate variability and change (PNA Costas, SNRCC, 2021) and d) State of the art on losses and damages from climate impact in Latin America and the Caribbean (Fundación Internacional y para Iberoamérica de Administra- tion y Políticas Públicas, Euroclima, 2022).

30 Barreiro, M., Arizmendi, F. and Trinchín, R. (2019): *Climate Variability and Change in Uruguay. Material for training of national institutional technicians (a)*.

31 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*

32 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*

33 Barreiro, M., Arizmendi, F. and Trinchín, R. (2019), *Observed climate variability in Uruguay (b)*.

almost 50 % of the quarterly accumulated. In autumn there is a typical variability of 180 mm in the northern region, while in spring it is lower. Winter is the season with the lowest interannual variability in rainfall. This high interannual variability is partly due to the El Niño-Southern Oscillation (ENSO) [34] phenomenon. During Niño years there is a significant increase in rainfall in spring and summer, mainly north of the Negro River. During Niña years there is a decrease in rainfall throughout the territory for spring, summer and autumn. It is also important to mention that El Niño changes the daily distribution of rainfall over our region. It has been shown that during the El Niño phase there is a greater probability of occurrence of extreme daily rainfall events, while during the La Niña phase, the probability is [lower35] . This occurs because during El Niño some atmospheric circulation regimes that are associated with intense rainfall events tend to be favored, such as those associated with an increase in the intensity of the northern winds that bring humidity to our country. Mean annual rainfall shows positive trends across the country, close to 10-20 % between 1961 and 2017. This change is much smaller than the variability in the
This makes it difficult to detect and shows that Uruguay should continue to
adaptation to natural climate variability, since it will be very useful for adapting to longer-term changes. The increase in cumulative rainfall implies a change in more intense rainfall events, either in number and/or [intensity36].

As for the mean wind field, during the 1979-2020 period, an increase in the easterly component of winds was observed during spring in the central-west region and in the southeasterly component during autumn in the eastern region of the country. Climate model projections indicate a southward shift of the permanent South Atlantic anticyclone during all seasons of the year, which will result in average winds with a stronger easterly component. Intense winds in Uruguay are associated with extratropical cyclones and mesoscale phenomena, such as convective complexes and turbulence lines. The latter are the same processes that give rise to storms in our country, so changes in rainfall will be associated with changes in extreme winds. Strong winds in severe storms are mainly due to the associated downward convective currents, have scales of tens of meters to several kilometers and last for a few minutes. These downdrafts may reach speeds in excess of 200 km/h. The winds associated with the passage of severe storms can also cause extensive damage due to the generation of [tornadoes37].

On the other hand, extratropical cyclones have larger, synoptic scales, and the horizontal extent of the associated intense winds is on the order of hundreds of kilometers and can last for several hours. The sustained wind speed (prome-

34 ENSO results from the coupling between the ocean and the atmosphere of the tropical Pacific Ocean. At the oceanic level, El Niño (La Niña) is an anomalous warming of the equatorial waters of the central and eastern Pacific Ocean.
35 Grimm, A.M. and R. Tedeschi (2009): *ENSO and extreme rainfall events in South America.* J. Climate 22: 1589-1609.
36 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*
37 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*

The surface speed can reach up to 100 km/h in extreme cases, with higher wind gusts in coastal areas[38].

In addition to annual variations, the climate shows interdecadal variability, generating anomaly patterns similar to those of El Niño, but with longer time scales. During the warm phase of these oscillations, Niño events tend to be more frequent and intense than in the cold phase[39].

Superimposed on natural variability is the signal of climate change, which is not restricted to a change in average rainfall or temperature conditions in a region, but is generally accompanied by changes in the frequency of occurrence and intensity of meteorological (e.g., cold and heat waves) and hydroclimatic (e.g., droughts) extremes.

1.4.2. Climate projections[40]

Uruguay's climate projections for the 21st century were based on ten models[41] which tightly represented the climate of Uruguay, each model was run for the SSP245, SSP370 and SSP585 scenarios for two time horizons; short-term (2020-2044) and long-term (2075-2099)[42].

FIGURE 4. Projections.

VARIABLE	STATIONS	HORIZON	STAGES		REGIONALIZATION
			SSP245	SSP585	
TEMPERATURE	SUMMER	2050	0,5 - 1,5°C	0,5 - 1,5°C	Gradient east - west Gradient
		2100	2°C	2 - 4°C	east - west Gradient east - west
	WINTER	2050	0,3 - 0,5°C	0,6 - 0,9°C	Uniform heating
		2100	1,5°C	2,8 - 3,5°C	Uniform heating
PRECIPITATION	SUMMER	2050	-	-	No defined trend
		2100	↑ 30%	↑ 60%	Highs on the north coast
	AUTUMN	2050	↑ 20%	↑ 30%	The whole country, maximum in the north
		2100	↑ 50%	↑ 90%	The whole country, higher values in the Northeast

SOURCE: SECOND NATIONAL CONTRIBUTION DETERMINED (2022) BASED ON DATA OBTAINED FROM THE REPORT ON CLIMATE PROJECTIONS FOR URUGUAY. PRODUCT PRODUCED WITHIN THE FRAMEWORK OF THE PNA COSTAS AND PNA CIUDADES, MVOTMA - FACULTY OF SCIENCES AGREEMENT[43].

An increase in average temperature and precipitation has been detected, as well as an increase in intense precipitation and minimum temperatures. The analysis also indicates that extreme winds have increased, mainly in the coastal area of the country during the winter.

38 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*

39 Barreiro, M. (2010): *Influence of ENSO and the south Atlantic Ocean on climate predictability over Southeastern South America*. Clim. Dyn, no. 35, pp. 1493-1508.

40 The scenarios developed for the IPCC Sixth Assessment Report are called Socioeconomic Shared Pathways (SSP) and use the results of the state-of-the-art climate model (CMIP6), unlike those used for the IPCC Fifth Assessment Report. Uruguay's climate projections for the 21st century are based on mo- dels that will be published in the IPCC Sixth Assessment Report (Barreiro et al., 2019). The models have been gaining complexity and spatial resolution as the number of experiments has increased. Barreiro et al. (2019) used ten mo- delos to better represent the climate of Uruguay, each run for the SSP245, SSP370 and SSP585 scenarios for two time horizons: short term (2020-2044) and long term (2075-2099).

41 M. Barreiro, F. Arizmendi and R. Trinchín (2019): *Climate projections over Uruguay (c).*

42 SNRCC (2022): *Second Nationally Determined Contribution to the Paris Agreement. Eastern Republic of Uruguay.*

43 M. Barreiro, F. Arizmendi and R. Trinchín (2019): *Climate projections over Uruguay (c).*

Climate model projections indicate that in a context of climate change, the increase in average temperature will continue with a range of 1.5 to 5.5 °C by the end of the 21st century, depending on the scenario, and an increase in heat waves is expected.

In terms of precipitation, the models indicate an increase in average rainfall of 20-30% during autumn and summer and a decrease in the southwest of the country during spring for the end of the 21st century. Precipitation extremes would also increase, and the number of days with light rainfall would decrease, which would imply a situation with a greater number of dry days separated by intense precipitation events.

The projected changes in extreme winter winds are robust and it is expected that the frequency of occurrence of these events will continue to increase in the coastal zone[44].

By contrasting the observed and simulated evolution of the annual mean temperature at Uruguay for the period 1961-2014 with projections for the end of the 21st century.
The increase in the annual mean temperature is almost linear, as well as a difference in the nes at the regional level. Uruguay's annual accumulated precipitation shows a high inter-annual variability ranging from -5 to 10 % in the short term horizon, and between -7 and 35 % in the long term horizon[45].

The results under the SSP585 scenario indicate that during the 21st century the same trends detected in the last 70 years would continue during the winter. That is, a decrease in the frequency of occurrence of low pressure systems south of Uruguay and of southerly winds, as well as an increase in the occurrence of cyclones and anticyclones over the Atlantic Ocean. Therefore, it is expected that the number of extreme wind events will continue to increase, mainly in the southern region of the country during the winter. In spring and summer, a positive trend is projected for the pattern characterized by a northeasterly wind associated with an anticyclone located in the Atlantic Ocean. These trends suggest a future increase in the occurrence of extreme wind events in the east of the country, mainly in spring. Likewise, a negative trend in the pattern associated with northerly winds is projected for the warm season. This decrease suggests less moisture transport, which counteracts the increase in atmospheric moisture content due to higher temperatures. The projected increase in summer and autumn precipitation, as well as the decrease during spring in the southwest of the country, suggests that the net result will depend on the season[46].

Future projections show a gradual positive trend with a greater occurrence of extreme events. The interannual phenomenon with the greatest impact on precipitation in Uruguay is ENSO. The CMIP5 model shows that extreme events associated with ENSO tend to increase in frequency as global temperature rises. In addition, extreme events related to La Niña could

44 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*
45 Barreiro, M., Arizmendi, F. and Trinchín, R. (2019): *Observed climate variability in Uruguay (b).*
46 SNRCC (2021): *National Adaptation Plan for Climate Variability and Change in Cities and Infrastructure (PNA Cities).*

become more frequent, particularly three-month drought events in the short term horizon. Heat waves in our country would increase in frequency and duration by the end of the century, mainly in the northern region[47].

In turn, the projected average sea level rise for the RCP8.5 scenario is 80 cm at the end of the century[48]. The two typical situations that cause an extreme rise in the level of the La Plata River are related to coastal cyclogenesis and the arrival of fronts from the south. Along the coasts of the Rio de la Plata and the Atlantic Ocean, flash floods are caused by a combination of meteorological and hydrological effects. The occurrence of high tides with large atmospherically induced storm surges raises the average sea level by three meters above its normal level, causing the elimination of beaches and dunes, damage to coastal infrastructure and risks to navigation[49].

According to several studies, sea level rise in Montevideo has been estimated at 11 cm, of which 2-3 cm correspond to the last three decades[50]. The variation is even more significant at the remaining tide stations along the coast. Uruguay (La Paloma, Punta del Este, Colonia)[51].

At the regional level, an unprecedented combination of extremely high and persistent air temperature and low wind speed induces an intense heat rise cycle which in turn influences the thermal stratification of the water column of the La Plata River discharge plume on the shelf[52]. Atmospheric heat fluxes are responsible for these processes. During the historical series analyzed (1988 - 2017) on the Uruguayan shelf, more than half of the days with maximum heat waves occurred from 2014 onwards. The most intense event occurred during the austral summer of 2017, reaching a temperature of 26.8ºC; 1.7ºC above previous maximums.

In turn, in relation to climate variability in the Uruguayan coastal zone, cold water upwelling events have been recorded during the summer associated with wind patterns. On the synoptic scale, two different upwelling configurations were identified with a duration ≤ 4 days[53] . One responds to easterly winds and is located in the estuary of the Río del Plata, and the other is located on the east coast of the territory -oceanic region- associated with northerly winds. Analyzing the interannual scale, the frequency and occurrence of these upwelling events are associated with the El Niño phase of the Southern Oscillation.

47 Barreiro, M., Arizmendi, F. and Trinchín, R. (2019): *Observed climate variability in Uruguay (b).*
48 Gómez Erache M. (2021). National Adaptation Plan (NAP) for the coastal zone of Uruguay. Ministry of Environment; Cli- mate Change Direction. Background paper, 68 pp.
49 SNRCC (2021): National Adaptation Plan for the Coastal Zone in the face of climate variability and change (PNA Costas).
50 FCIEN (2009): *Future climate and sea level scenarios, based on global climate models and the effect of wind and sea level. and flow rate on sea level fluctuations*.
51 SNRCC (2021): National Adaptation Plan for the Coastal Zone in the face of climate variability and change (PNA Costas).
52 Manta, G.; de Mello, S.; Trinchín, R.; Badakian, J.; Barreiro, M. (2018): *The 2017 record marine heatwave in the Southwestern Atlantic Shelf*. Geophysical Research Letters 45(22):12,449-12,456.
53 Trinchín, R.; Ortega, L.; Barreiro, M. (2019): *Spatiotemporal characterization of summer coastal upwelling events in Uruguay, South America*. Reg. stu. Mar. Sci. 31: 100787.

1.4.3. Main risks and impacts

Climate change has profound impacts on the territories and, therefore, on the socioeconomic activities that take place there.

Among the impacts of climate variability and change affecting the country are droughts and the resulting losses in the agricultural sector, energy cost overruns and difficulties in the supply of drinking water; floods that affect public health and displaced persons, damage to production and infrastructure; extreme coastal events that cause erosion, damage to infrastructure and affect tourism; strong storms that put the population at risk; cold/heat waves that affect human and animal health[54].

As mentioned above, the phenomenon par excellence that generates variability and gives predictability to climatic anomalies year after year in our region is the El Niño Southern Oscillation (ENSO) phenomenon. This phenomenon is also often the cause of
times associated with extreme weather events [55].

The impact of the El Niño-Southern Oscillation (ENSO) phenomenon is mainly evident in spring and autumn and increases the probability that rainfall will be of greater magnitude than historical data for those times of the year. In contrast, in years when La Niña predominates, the country suffers prolonged and deep droughts. Drought events have increased in frequency and intensity in recent decades. These natural hazards, in interaction with exposure and social vulnerability, have caused multiple impacts on populations, infrastructure, ecosystems, biodiversity and the agricultural sector[56].

Losses and damages due to the effect of these extreme events have been very significant in recent years and have highlighted the country's vulnerability to this type of phenomena, given the strong dependence on the climate for the development of the different sectors of the economy and the vulnerability of very sensitive sectors of the population that are exposed to extreme events. These impacts imply direct economic losses, damage to infrastructure, loss of human lives and psychosocial damage[57].

In Uruguay, floods are the most frequent phenomenon and have the greatest impact, annually causing the evacuation of populations and affecting adequate sustenance (food, housing, health), as well as economic losses derived from losses and damage to private and state-owned goods and services[58].

The most frequent types of flooding are caused by the overflowing of rivers and streams following persistent rainfall events (drainage flooding) or by the overflowing of rivers and streams following persistent rainfall events (drainage flooding).

54 SNRCC (2021): *NAP Cities.*

55 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United Nations Framework Convention on Climate Change.*

56 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the UNFCCC and* SNRCC (2019): *Fifth National Communication to the Conference of the Parties to the Framework Convention on Climate Change.*

57 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United Nations Framework Convention on Climate Change.*

58 Presidency of the Oriental Republic of Uruguay (2021): *Voluntary National Report on the Sustainable Development Goals 2021.*

meteorological tides (south storms). Urban floods cause the evacuation of population groups, affecting their health (physical and emotional), income and housing. Meteorological tides (southeast storms) affect the coastal ecosystem and cause material damage to infrastructure. There are currently 11 localities with a very high risk of flooding, 15 with a high risk and 42 with a medium risk, totaling 68 localities[59].

On the other hand, the most important climate risks for cities are the increase in temperature and its extremes, sea level rise for coastal areas, droughts, intense precipitation with its associated rapid flooding and extreme winds. Climate threats to Uruguay's cities translate into a set of effects and impacts exacerbated by global warming. The increase in average temperatures and their extremes includes a greater number and duration of heat waves and affects urban areas with higher building density and lack of vegetation, where urban heat islands may occur, problems related to climate change and the effects of climate change.
and demand for energy and water supply and demand, and public health problems.
The increase in precipitation that emerges from the projections - with its peculiarities and changes related to large-scale phenomena, which may even lead to changes in the number and duration of droughts. The increase in precipitation that emerges from the projections -with its peculiarities and changes related to large-scale phenomena, which may even cause changes in the number and duration of droughts- makes it possible to foresee that water and surface runoff will continue to be a critical issue for cities, due to their associated problems, such as flooding, impacts on infrastructure, effects on climate-dependent activities, problems of water quantity and quality, and pollution. The increase in frequency and intensity of extreme winds affects cities and their environments in aspects such as food production, the stability of infrastructure and buildings, the continuity of activities and the safety of people[60].

Cyclones are frequent in Uruguay and the associated strong winds damage infrastructure and property along the coastal strip, as their strong winds not only have a direct impact on land constructions, but also generate waves and sea level rise[61].

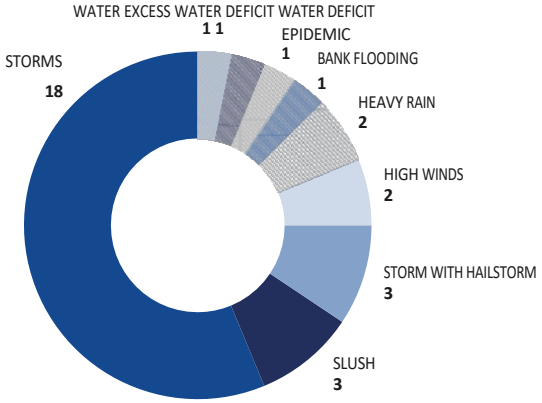
The coast is where many of the changes in the climate system are expected to be felt. This is where most of the population lives (70%) and is the main source of income in the tourism sector. In coastal areas, changes in winds and precipitation, combined with the rise in mean sea level (MSL), increase the risk of flooding and erosion, with flooding, tidal waves, loss of sand from beaches and the retreat of ravines, affecting activities, ecosystems and key infrastructure in cities. These problems have a disparate impact and the highest costs fall on those areas of the cities with the most vulnerable populations[62].

On the other hand, within the framework of the damage and loss group, a pilot of the 2018 fiscal year was conducted in which all the climatic events of that year were analyzed and how

59 MA - DINAGUA (2022): *National Atlas of urban flooding and storm drainage*, Urban flooding and storm drainage team (IDU).
60 SNRCC (2021): *NAP Cities.*
61 SNRCC (2021): *NAP Cities* and SNRCC (2021): *PNA Costas.*
62 SNRCC (2021): *NAP Cities* and SNRCC (2021): *PNA Costas.*

These affected the socio-territorial sectors (health, education, culture, urban habitat, people), infrastructure (energy, hydrology, water and sanitation), production (agriculture, tourism, trade) and global effects (macroeconomic analysis).

FIGURE 5. Events.



SOURCE: DAMAGE AND LOSS REPORT 2022. BASED ON INFORMATION FROM THE MINISTRY OF ENVIRONMENT OF URUGUAY.

The results of the pilot exercise are summarized below. Half a million people affected, 97% of children attending public schools, 2% of people displaced by floods and 1% of people requiring drinking water supply were identified. In qualitative terms, the main effects were in the agricultural sector. Damages and losses due to weather-related events amount to USD 564 million, which represents 0.94 % of the 2018 GDP and 95.1 % are related to the productive sector. The riverbank flooding event represents 90% of total damages and 98% of losses are due to water deficit. The macroeconomic impact is estimated at US$ 199 million (0.33% of GDP), which includes a loss of US$ 97 million in wages (equivalent to 8,104 jobs)[63].

Agricultural production is particularly sensitive to environmental conditions. The traditional climatic vulnerability is being exacerbated by climate change, resulting in production losses and variations in crop and pasture production. The most important climatic events in terms of the risks they imply for agricultural production are droughts, excessive rainfall, heat waves, frosts, storms, strong winds, hail and lack of cooling hours. In turn, the impacts vary in each production system[64].

In livestock farming, the event that has the greatest impact is drought through its direct effect on productivity indicators such as calving and mortality rates or meat production per hectare, and also through its impact on economic indicators that result in lower net income per hectare and lower animal feeding costs. The major direct impact of the lack of rainfall is on forage production[65].

63 Fundación Internacional y para Iberoamérica de Administración y Políticas Públicas (2022): *State of the art on climate impact loss and damage in Latin America and the Caribbean* (Euroclima).

64 SNRCC (2019): National Plan for Adaptation to climate variability and change for the agricultural sector (PNA Agro).

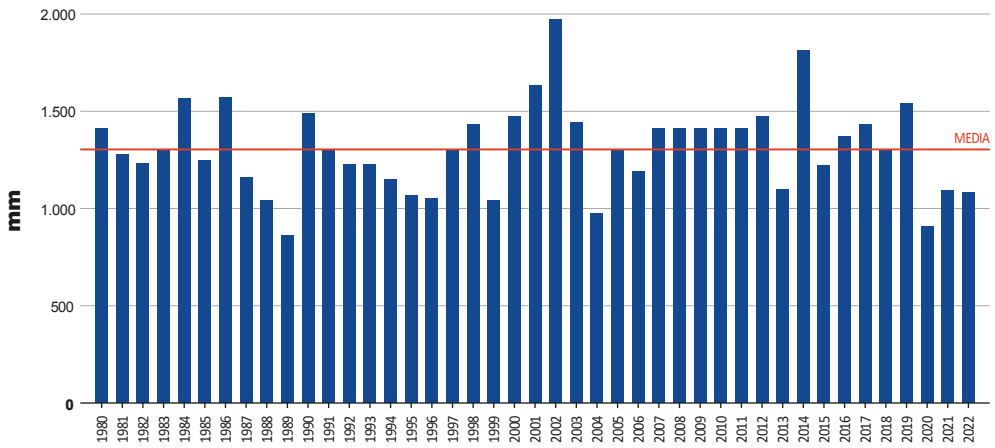
65 SNRCC (2021): *Fourth Biennial Update Report BUR4 to the Conference of the Parties to the United Nations Framework Convention on Climate Change,.*

During 2020, there were two episodes of water deficit and drought covering a large part of the country (March and December). In both cases, an agricultural and livestock emergency had to be declared (5.7 million hectares in the first and 14 million hectares in the second)[66] . This drought resulted in lower soybean crop yields, with a consequent decrease in soybean exports[67] .

During the first half of 2021 the climatic events of greatest magnitude have been hydrometeorological events characterized by intense rains and storms that affected a large part of the country[68]. As in the previous year, an agricultural emergency was declared in December due to a water deficit (12 million hectares) [69].

In the summer of 2022-2023 the country faced an important drought. With this, it reached 3 consecutive years with anomalies in terms of accumulated precipitation, which configures an extreme situation of water deficit. The estimation of available water in soils presented a critical reality throughout the national territory. Due to this
The situation should have led to the declaration of an agricultural emergency in October 2022 (17.4 billion dollars).
The following items were considered: livestock,
dairy, horticulture, fruit farming, agriculture, beekeeping, poultry farming, and forestry[70]. This drought also had an impact on the availability of drinking water to the population.

FIGURE 6. Cumulative annual average at country scale from 1980 to 2022.



SOURCE: INUMET (2023): URUGUAY METEOROLOGICAL DROUGHT REPORT 2020-2023.

Direct losses in the primary agricultural sector have been estimated at USD 1,809 million in this agricultural emergency, being in historical terms the largest losses recorded in the last three decades[71].

On the other hand, the energy sector continues to have a significant dependence on hydroelectricity, which is affected by the high variability in rainfall and,

66 MGAP - OPYPA (2023): *Preliminary estimates. Impact of water deficit 2022-2023.*
67 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United N a t i o n s Framework Convention on Climate Change,*
68 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United N a t i o n s Framework Convention on Climate Change.*
69 MGAP - OPYPA (2023): *Preliminary estimates. Impact of water deficit 2022-2023.*
70 MGAP - OPYPA (2023): *Preliminary estimates. Impact of water deficit 2022-2023.*
71 Chapter 4 of the Explanatory Memorandum of the Financial Statements and Budget Execution Balance. Available here.

Both floods and droughts affect its availability in a system with low storage capacity.

The events described above reflect the demand for attention and permanent availability of resources by the State to face the different impacts of natural phenomena derived from climate change and variability. In this sense, the country assumes the cost of the losses caused, allocates resources to compensate for them (when possible), but it is necessary to have specific additional means of implementation to support adaptation measures that cushion this type of impacts and avoid greater costs in the future[72].

It is necessary to emphasize that Uruguay is working to collect more information, with a higher level of completeness, focused on the recording of impacts and their respective evaluation of losses and damages caused; for the evaluation of actions to reduce vulnerability; and for the economic evaluation of implementation.
of climate change adaptation measures.

The systematization of information related to the registration of extreme events is the responsibility of the National Emergency System (SINAE), created in 2009 under the Executive Branch. In 2019, the National Policy for Comprehensive Emergency and Disaster Risk Management in Uruguay 2019-2030[73] was drafted and endorsed by the Executive Branch through Decree No. 66 of 2020. In 2020, a first version of the Comprehensive Monitor of Risks and Affectations (MIRA)[74] was consolidated as an information system of the SINAE. This development has been made to evaluate the impact of the COVID-19 pandemic, but it is useful for monitoring and analyzing information related to climate action[75].

The following table shows the total number of people displaced by all extreme weather events in Uruguay in the period 2020-2023 (up to September 20, 2023); the information is broken down according to evacuees, self-evacuees and number of deaths.

Displaced persons (evacuated and self-evacuated) and deaths due to all extreme weather events occurring in Uruguay, for the years 2020, 2021, 2022 and 2023 (up to September 20, 2023).

Persons displaced (evacuated and self-evacuated) and killed by all extreme weather events.
The Company will be responsible for the costs incurred in Uruguay, for the years 2020, 2021, 2022 and 2023 (until September 20, 2023).

	2020	2021	2022	2022
Displaced persons (evacuees)	119	197	421	70
Displaced persons (self-evacuees)	39	21	304	131
Total number of displaced persons	**158**	**218**	**725**	**201**
Deceased persons	0	2	4	1

SOURCE: MIRA VIEWER. AVAILABLE HERE.

72 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United N a t i o n s Framework Convention on Climate Change.*
73 SINAE (2019): Política Nacional de Gestión Integral del Riesgo de Emergencias y Desastres en Uruguay 2019-2030.
74 Available here.
75 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United N a t i o n s Framework Convention on Climate Change.*

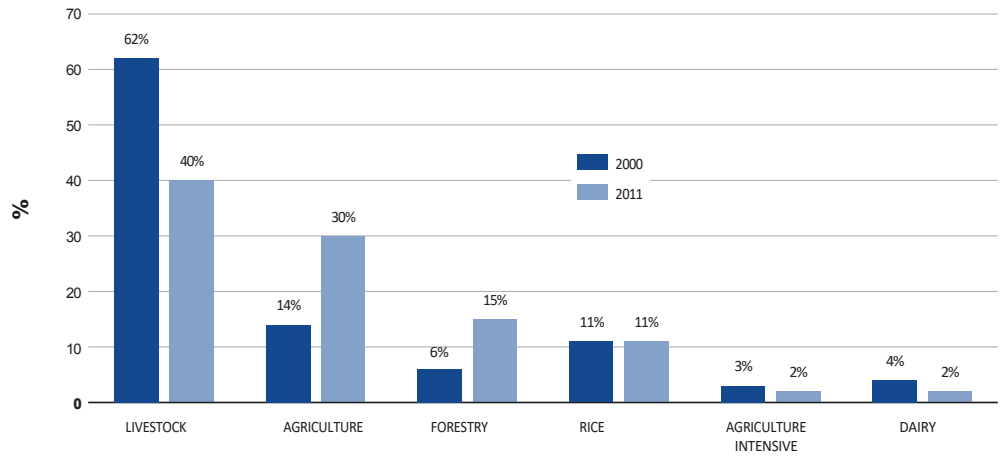
2. Specific Areas and Sectors

2.1. Agriculture and forestry

Uruguay's economy is strongly linked to the agricultural sector, represented by livestock, agriculture, forestry and agribusiness. Primary production is based on open-air activities, which exposes it to variability and climate change.

Uruguay has 16.4 million hectares for agricultural use, representing more than 90% of the country's land area. The country's endowment of natural resources and productive factors give it comparative advantages in food production, which has positioned it as a world supplier of food and agricultural products. The last agricultural census conducted in 2011 showed that the agricultural sector in Uruguay underwent a significant change in the relative land use among the main productive activities. The land destined to
agriculture went from representing 14% of cultivated land in 2000 to 30% in 2000.
2011, while cattle ranching went from 62 % to 40 % in the same period. The reduction in land use by livestock farming did not mean lower production, but implied a more intensive use of land[76].

FIGURE 7. Share of agricultural activities in the cultivated area.



SOURCE: LIVESTOCK SECTOR REPORT 2022, URUGUAY XXI.

The main products linked to the agricultural chain include soybeans, rice, wheat, corn, barley and, more recently, rapeseed and carinata[77] . Eighty-six percent of the rainfed agricultural area planted with summer crops is under Soil Use and Management Plans[78] . Agribusiness, fishing and mining activities accounted for 6.5% of GDP in 2022[79].

It is noteworthy that, when including the associated subsectors and industries (it is referred to as the agroindustrial sector) its contribution reaches between 14% and 16% of GDP (2015-2019). Agroindustry, in addition to its direct participation, generates positive effects on

76 Uruguay XXI (2022): *Livestock Sector in Uruguay.*
77 Uruguay XXI (2022): *Agricultural Sector in Uruguay.*
78 Presidency of the Oriental Republic of Uruguay (2021): *Voluntary National Report on the Sustainable Development Goals 2021*.
79 Available here.

other sectors, with backward linkages (due to greater demand for transportation services, storage, production of inputs, telecommunications, etc.) and forward linkages (a large part of national agro-industrial production serves as inputs for other industries) [80].

The recent international context has been marked by: the COVID-19 pandemic (the "Covid zero" measures, the economic slowdown in China), the Russia-Ukraine war (which resulted in the energy crisis in Europe, the historic increase in food and raw material prices and food insecurity) and the increase in interest rates to contain inflation[81]. In this context, the "Agriculture, fishing and mining" aggregate recorded a drop of almost 3 % in 2022 compared to 2021.

The forestry sector is one of the most dynamic sectors of the Uruguayan economy in this century. After the 1987 Forestry Law, plantations multiplied and provided the basis for the development of a vast array of primary activities,
industrial and service sectors. The sector is showing growth, which is reflected in the levels of activity, employment and investment. In the last two decades, and in a context of expanding exports of goods, the external placements of the forestry sector (wood, pulp and paper) increased from 5% in 2011 to represent 19% in 202182.

The GDP of the primary phase (forestry, timber extraction and related services) grew at an average rate of 7.7% per year in the decade 2010/2019 and the industrial phase had an average annual growth of 6.5% in the same period[83].

Among the activities related to the industrial phase is the generation of energy from forestry products (forest biomass and by-products of mechanical and chemical transformation), which has gained relevance and has an important perspective due to the increase in the supply of raw materials and the policies imposed by the State (see section on the energy sector).

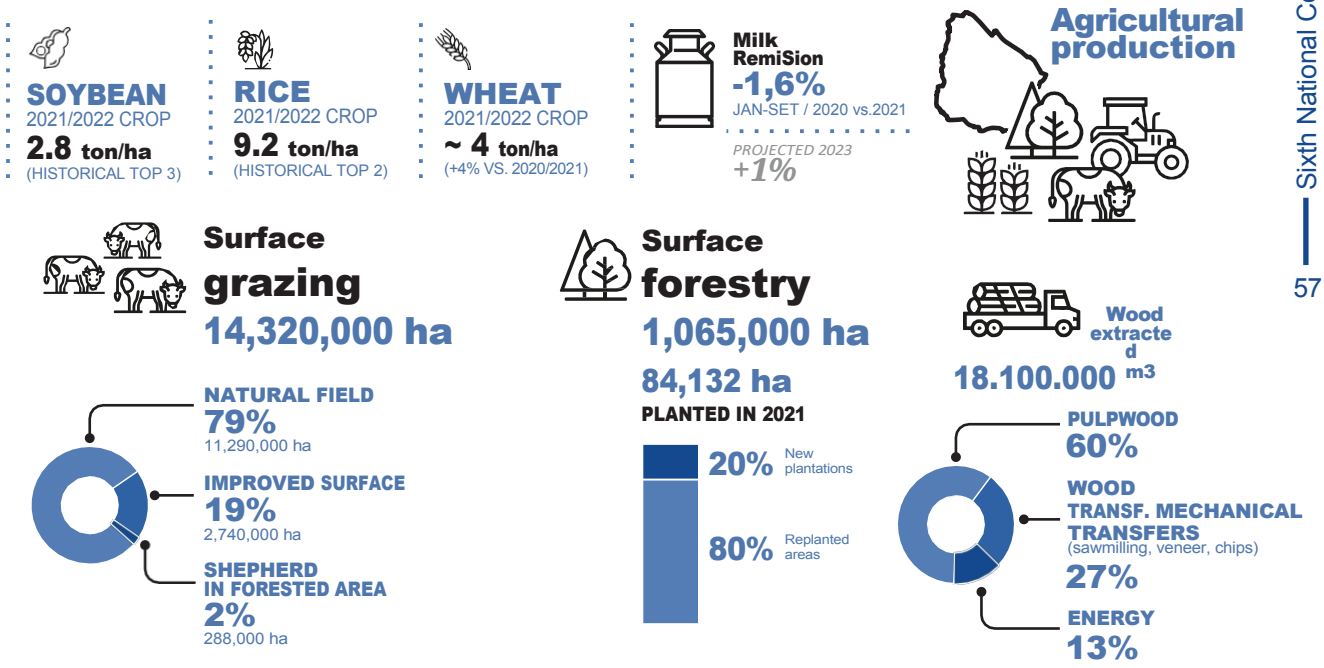
Uruguay's forestry policy has ensured sustainable forest management. It should be noted that practically all of Uruguay's forestry production and its industries have been certified by the two main global certifiers: FSC (*Forest Stewardship Council*) and PEFC (*Program for the Endorsement of Forest Certification*). Uruguay's Technological Laboratory (LATU) promotes and technologically supports the development of the timber production chain[84].

80 Uruguay XXI (2022): *Livestock Sector in Uruguay.*
81 MGAP - OPYPA (2022): *OPYPA Yearbook.*
82 Uruguay XXI (2022): *Forestry Sector in Uruguay.*
83 Uruguay XXI (2022): *Forestry Sector in Uruguay.*
84 Uruguay XXI (2022): *Forestry Sector in Uruguay*.

2.1.1. Production[85]

The 2021/22 fiscal year saw improvements in the main production indicators for beef cattle, despite the unfavorable weather conditions associated with the La Niña phenomenon in the last three years. For the 2022/23 fiscal year, a drop in production measured in live weight is expected, due to the high levels obtained in previous years.

FIGURE 8. Main Production Indicators.



In 2022, the grazing area was 14.32 million hectares, of which 11.29 million hectares, based on the DICOSE declaration and measured as the sum of the area of natural fields and stubble, corresponds to natural fields (79 %), 2.74 million hectares are improved areas (19 %) and approximately 288 thousand hectares are grazing in forested areas (2 %).

The referral of milk to industrial plants decreased 1.6 % in the January-September 2022 period compared to the same period in 2021, and it is expected that at the end of the year the year-on-year decrease will be almost 1 %. By 2023, it is expected that the milk referral to industrial plants will recover slightly and register an increase of around 1 %.

With respect to summer agriculture, the greater availability of water than expected during the second half of January 2022 resulted in good soybean yields for the 2021/22 harvest (2.8 tons per hectare, the third highest in history), which was also characterized by an increase in the area planted compared to the previous cycle. For the 2022/23 crop year, local soybean production could fall compared to the previous crop year because, despite the increase in planted area driven by high prices, lower yields are expected based on the weather situation (which indicates that rainfall during the 2023 summer was below normal for the third consecutive year).

85 Based on MGAP - OPYPA (2022): *OPYPA Yearbook.*

Rice production increased in the 2021/22 crop year due to an increase in the area planted and an average yield of 9.2 tons per hectare, the second highest on record.

Weather conditions were very favorable for winter crops. In particular, wheat production increased with respect to the previous harvest (4 %), driven by a slight increase in the area planted and a good average yield (close to 4 tons per hectare). In addition, the harvest was characterized by excellent grain safety and quality conditions.

TABLE 10. Physical production of the main agricultural and livestock products. Variation with respect to the previous harvest.

Item	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Beef (1)	1,7 %	-2,8 %	-2,3 %	P,4 %	2,4 %	-6,6 %
Milk	P,7 %	-0,8 %	0,P %	4,8 %	-0,2 %	0,1 %
Wheat	-41,P %	65,3 %	6,7 %	20,6 %	4,0 %	6,3 %
Barley	-43,2 %	65,7 %	-4,P %	46,5 %	3,5 %	-24,6 %
Rapeseed	6,5 %	75,0 %	32,1 %	67,4 %	64,7 %	63,4 %
Rice	-10,8 %	-4,5 %	0,7 %	12,7 %	P,3 %	-1,P %
Corn	-34,4 %	163,P %	-6,4 %	0,8 %	14,1 %	-1,8 %
Soybeans	-58,8 %	112,0 %	-2P,6 %	-14,2 %	60,7 %	-12,0 %
Sorghum	-64,P %	66,2 %	-1P,7 %	-P,0 %	-13,5 %	-1,7 %

(1) VOLUME IN KILOGRAM OF LIVE WEIGHT. SOURCE: OPYPA YEARBOOK. OPYPA ESTIMATES AND PROJECTIONS AS OF NOVEMBER 2022.

In terms of forest plantations, in 2021, they occupied an area of 1,065,000 hectares, which represents approximately 6% of the country's surface area[86]. From 1990 to 2010, the country forested about 690,000 hectares effectively with plantations, quadrupling the total area planted in the period. Most of the plantations were developed based on the *Eucalyptus* and *Pinus* genera, species promoted by Forestry Law No. 15,939, approved in December 1987.

TABLE 11. Forest area.

Total BoSqueS area (Effective and native BoSqueS)	**1,912 thousand hectares**
Total Effective Planted Forest Area (Year 2021) (1)	1,065 thousand hectares
Native Forest Area (Year 2021) (2)	847 thousand hectares

SOURCE: DIEA, YEARBOOK 2022 AND DGF-MGAP 2021 CARTOGRAPHY. (1) GENERAL DIRECTORATE OF FORESTRY. EVALUATION & INFORMATION DIVISION. CARTOGRAPHY 2021 (IMAGES AS OF JANUARY 2021) PLUS THE ESTIMATION OF AREAS WITH NEW PLANTATIONS BASED ON THE NURSERY SURVEY.
(2) GENERAL DIRECTORATE OF FORESTRY. EVALUATION & INFORMATION DIVISION. NATIONAL FOREST NATIVE FOREST MAPPING - YEAR 2021.

Of the total area planted in 2021, equivalent to 84,132 hectares, 20% were new plantations and 80% corresponded to replanted areas[87].

Timber extraction was estimated at 18.1 million cubic meters in 2021. Regarding the destination of the wood harvested, it is estimated that 60 % is destined for the chemical processing industry (pulpwood) and 27 % for the mechanical processing industry (logs for sawmilling, veneer, chips), while 13 % is destined for energy purposes (firewood for residential and industrial use)[88].

86 Uruguay XXI (2022): *Forestry Sector in Uruguay.*
87 MGAP-DIEA (2022): *Anuario Estadístico Agropecuario.*
88 MGAP-DIEA (2022): *Anuario Estadístico Agropecuario.*

On the other hand, the current area of native forest in Uruguay is estimated at 847 thousand hectares, which represents 4.84% of the national territory, and has remained relatively stable during the last decades as a result of incentives and regulations that control logging (established in the Forestry Law, which prohibits logging except for exceptions - Article 24).

It should be noted that Uruguay has plans for the responsible use and management of soils, aimed at preventing and controlling soil erosion and degradation. These regulations contribute to Uruguay's objective of having sustainable agricultural production systems.

Uruguay's Soil and Water Conservation Law (Law No. 15,239) of 1981 declares it to be of national interest to promote and regulate the use and conservation of soils and surface waters for agricultural purposes. This Law was regulated in 1990 and amended in 2004 with Decree No. 333 and, subsequently, in 2008 with Decree No. 405. The latter decree establishes, in its Article 5º,
that the submission of a Responsible Land Use and Management Plan shall be required in which must state that the projected production system determines tolerable erosion, taking into account the soils of the farm, the sequence of crops and management practices. This regulation began to be applied in 2013, after a pilot stage in selected farms.

It is important to mention that the First Nationally Determined Contribution established as a goal for the year 2025 that 95% of the agricultural area be under Land Use and Management Plans[89] and that by the year 2021 this goal has been surpassed[90].

2.1.2. Exports

Beef was the main exported product in 2022 with values of USD 2,557 million, accounting for almost 20% of total exports[91]. This item was followed in the ranking by soybean exports (USD 1,922 million), which more than doubled the values exported in 2021 (USD 892 million) [92] and cellulose, which ranked third in the ranking of products, totaling exports of USD 1,818 million in 2022[93].

In particular, during 2022, the increase in the average export price of cellulose stood out, a phenomenon that was a determining factor for a new increase in the external sales of the entire chain. The prospects of a cooling global economy and, in particular, the deterioration of economic conditions in the destination markets for Uruguayan forestry products, are warning signs for 2023. Despite the above, the start of operations of the country's third pulp mill and the development of new industrial projects in mechanical processing will bring dynamism to the chain's activity. In terms of co

89 By 2025, 95% of the agricultural area is under Soil Use and Management Plans, including the reduction of erosion and organic matter conservation on agricultural land, improving productivity and water storage capacity, and reducing the risk of erosion in extreme precipitation events.
90 Available here.
91 Uruguay XXI (2022): *Annual Foreign Trade Report.*
92 Uruguay XXI (2022): *Annual Foreign Trade Report.*
93 Uruguay XXI (2022): *Annual Foreign Trade Report.*

the forestry complex would record exports of just over USD 3,000 million in the million to the cellulose industry, which is a historic record for the country[94].

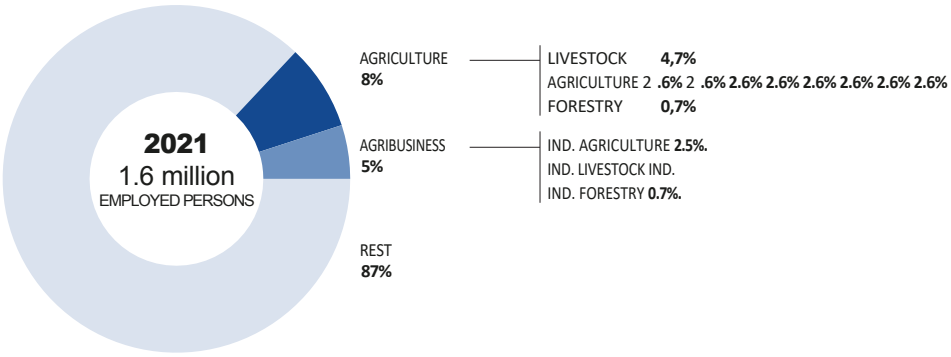
2.1.3. Employment

The agro-industrial sector employed approximately 210,000 people in 2021, representing 13% of the country's employed population (of which some 127,000 were in the agricultural sector, representing 8% of the country's employed population, while 83,000 worked in related industries, 5% of the total)[95]. In addition, of the total number of employed men, 11.7% are in this sector of agricultural production, forestry and fishing, while for women this percentage drops to 3.8%[96].

Livestock was the main employer in the agricultural sector, followed by agriculture. In 2021, approximately 106,000 people worked in livestock activities and related industries. Of this total, 70 % were in agriculture.
primary activity, while the remaining 30 % were used by industry[97].
Total employment in the primary livestock farming sector has shown a downward trend in the last two years.
in recent years[98].

In 2021, some 80,100 people worked in agriculture or related industries, 51% worked in primary activities while the remaining 49% worked in industry[99].

FIGURE 9. Persons employed in agro-industrial activities.



Meanwhile, the number of people employed in the forestry sector in 2022 totaled 17,513 workers (the forestry phase with 8,559 workers and the industrial phase, which includes chemical transformation, with 8,954 workers). The data do not include the workforce employed in the transportation of wood products[100].

2.2. Energy

94 MGAP - OPYPA (2022): *OPYPA Yearbook.*
95 Uruguay XXI (2022): *Agricultural Sector in Uruguay.*
96 INE (2022): *Anuario Estadístico Nacional 2022.*
97 Uruguay XXI (2022): *Livestock Sector in Uruguay.*
98 MGAP - OPYPA (2022): *OPYPA Yearbook.*
99 Uruguay XXI (2022): *Agricultural Sector in Uruguay.*
100 MGAP-DGF (2023): *Forest Statistics 2023.*

Since it has no proven reserves of fossil fuels, Uruguay is an importer of petroleum, which it processes in a state-owned refinery, and has a low level of imported natural gas. Historically, electricity generation was based on four hydroelectric plants complemented by thermoelectric plants based on liquid fossil fuels. The vulnerability of the hydroelectric base to the impacts of climate change and variability represented a high dependence on fossil fuels used to meet demand, in addition to electricity imports, which also impacted greenhouse gas (GHG) emissions.

The energy sector has undergone a significant transformation in Uruguay. In particular, in the electricity sector, the incorporation of non-traditional renewable sources (wind, biomass, solar) was promoted, which reduced climate vulnerability and cost overruns in dry years with scarce availability of hydroelectric power, and also made it possible to reduce GHG emissions.

This sector is characterized by a strong participation of state-owned companies, with monopolistic companies in several services and strong regulation. The Executive Branch defines energy policies and the Energy and Water Services Regulatory Unit (URSEA) regulates the services offered to the population. In the electricity sector, the Electricity Market Administration (ADME) manages the market and the private sector enters the system as producers, as does the National Administration of Power Plants and Electric Transmissions (UTE), the state-owned company that has a monopoly in distribution and transmission, but not in generation and commercialization. Generation is based on competition in a wholesale market with contracts and spot purchases in addition to the national electricity company's own generation. In transmission and distribution, recognized as natural monopolies, regulated tariffs are assigned.

The country has an energy policy with a 2030 horizon that seeks universal access to energy with social integration, in a clean and sustainable manner, and which seeks the country's energy independence and promotes energy efficiency. Uruguay is also making progress in promoting its green hydrogen ecosystem through the development of its national strategy, which was presented in June 2022[101]. Based on these actions, the government is making progress in regulatory aspects, in attracting the participation of private actors, in deepening the knowledge of the technology, its production and logistics, and in the development of local capabilities[102].

As mentioned, universal access to energy has been one of the objectives of the Energy Policy; in 2022, 99.9% electricity coverage has been achieved, 100% in urban areas and 99.6% in rural areas[103].

101 More information here.
102 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
103 MIEM (2023): *National Energy Balance 2022.*

2.2.1. Offer

In 2022, in terms of supply, the conditions that characterized the year determined that the energy matrix would be 1% higher than in 2021.

Renewable energies accounted for 56% of the primary energy matrix in 2022 (compared to 37% in 2005), an excellent figure by international standards, although this value is lower than in 2019 (63%), mainly due to the variability of hydroelectric generation in the face of climate variations[104].

In 2022, energy supply reached 5,677 ktoe, which represents a historical record for the country, with an increase of 32% compared to 2011 levels and 92% compared to 2005 supply[105]. Energy supply by source in 2022 is broken down as follows: 43 % for oil and derivatives, 39 % for biomass source, 9 % hydro source electricity, 7 % wind source electricity, 1 % natural gas and 1 % for solar source electricity.

The sharp increase in power generation of the last decade and a half came accompanied by a change in the composition of the matrix. Energy obtained from non-renewable generation sources sensibly reduced its share in the total supply, from 60 % in 2000-2005 to 40 % in the 2017-2022 average[106].

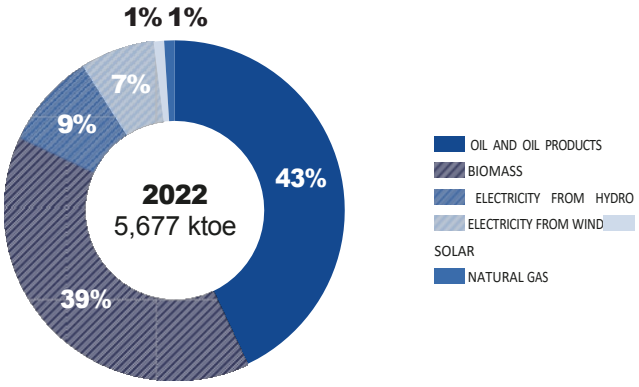
On the other hand, biomass, wind and solar energy began to play a more relevant role. Hydropower, on the other hand, decreased its weight in the supply, accounting for 9% of the total in 2022, compared to 23% in 2000-2005. The lower importance of this energy in the matrix is explained by the fact that electricity generation continues to increase, while the hydroelectric potential used has not grown. It should be noted that the country's most relevant water resources are almost fully utilized and the future increase in supply will only be possible through small hydroelectric power plants[107].

Biomass represents 39 % of the primary energy matrix and mainly supplies the industrial sector. In particular, biomass plants using residues from the cellulose pulp production process represent slightly more than 80 % of the country's installed capacity in this type of energy.

Finally, electricity imports have decreased systematically in recent times, and are currently of very little relevance within the country's energy supply matrix[108].

104 Uruguay XXI (2022): *Renewable Energies in Uruguay*
105 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
106 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
107 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
108 Uruguay XXI (2022): *Renewable Energies in Uruguay.*

FIGURE 10. Energy supply.



2.2.2. Electric power

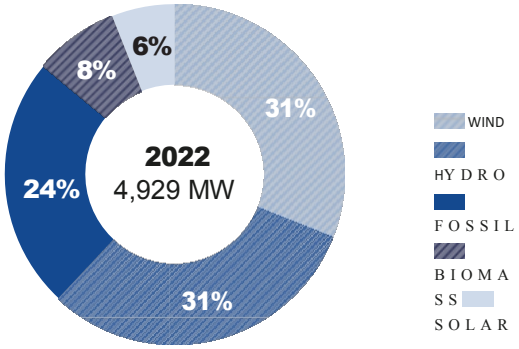
The electricity generated in 2022 came mainly from hydropower (5,686 GWh), which increased 8% compared to 2021, due to better weather conditions.
in the country and the region. In turn, the production of electricity from wind power has emissions was 4,783 GWh in 2022. Electricity from biomass decreased 11 %, however, its share remained at 17 %.

Fossil thermal generation fell by almost half compared to 2021 and went from a 15 % to a 9 % share in the generation matrix.

As a result, the share of renewable sources in the electricity generation matrix was 91 % in 2022, an increase of six percentage points over the previous year.

At the end of 2022, Uruguay had a total installed capacity of 4,929 MW. The power was composed of: 1,538 MW of hydraulic origin, 1,516 MW of wind power, 1,177 MW of fossil thermal, 417 MW of biomass thermal and 280 MW of solar photovoltaic generators. Considering installed capacity by source, 76% corresponded to renewable energy (hydro, biomass, wind and solar), while the remaining 24% was non-renewable energy (diesel, fuel oil and natural gas) [109].

FIGURE 11. Installed power by source.

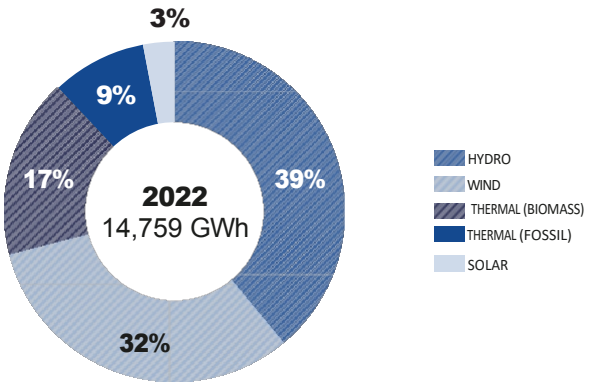


Uruguay's electricity production has maintained its growth path
and was 14,759 GWh in 2022, the third highest level only behind the records of

109 MIEM (2023): *National Energy Balance 2022.*

in 2019 (16,090 GWh) and 2021 (15,590 GWh). Between 2017-2021, the average electricity generation based on renewable sources was 94 %, while in 2022 it stood at 91 %. Leaving aside one-off effects recorded in recent years (due to climatic factors at the national and regional level), the trend indicates that non-traditional renewable sources (wind, biomass and solar) are gaining weight in the Uruguayan electricity mix. In 2022, they will account for 52% of total electricity generation. This contrasts with the production of thermal energy from fossil sources, which plummeted in the last 10 years, representing 5% in the average [2016-2021110].

FIGURE 12. Electricity generation by source....



Over the next five years, Uruguay is expected to invest USD 1.45 billion in the electric power sector. The state-owned company UTE will be the main investor, with a five-year plan (2023-2027) that contemplates investments of USD 1.1 billion. Seventy percent of this figure will be used for works to expand and improve the distribution and transmission of the electricity network. Other investments outside the state-owned company's fiscal area include the high voltage line between the Punta del Tigre power plant (San José) and the Cardal substation (Florida) for an investment of US$60 million, the closure of the northern transmission ring with a 500 kV line linking Tacuarembó and Salto, with an investment of US$220 million, the installation of a 30 MW photovoltaic solar park in Punta del Tigre. Finally, the USD 70 million investment by UPM contributes its new biomass plant to the national electricity system[111].

Uruguay's electricity system stands out for its reliability. According to the Global Competitiveness Index, Uruguay ranks first in Latin America in relation to the quality of electricity supply in the country. In November 2021, UTE achieved the highest distinctions by receiving, for the second time, the "Gold Award 2021" granted by the Regional Energy Integration Commission (CIER), being the best evaluated among 32 companies in the region (both public and private) [112].

110 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
111 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
112 Uruguay XXI (2022): *Renewable Energies in Uruguay.*

2.2.3. Imports and Exports

In 2022 there was a total electricity import of 7 ktoe. This marginal value was of the order of that which had been occurring prior to 2020, the year in which the purchase of electric power had a one-off increase[113].

In 2022, electricity exports amounted to 122 ktoe, half as much as in 2022.
to the previous year[114].

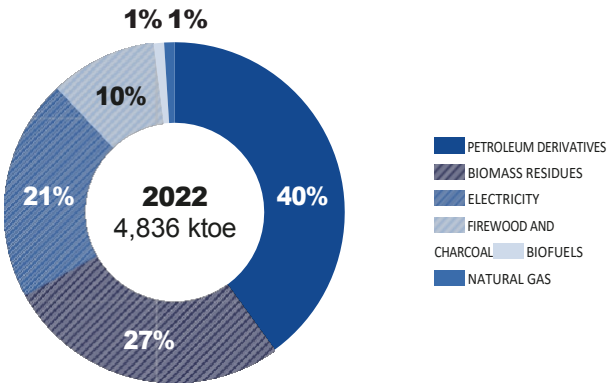
Electricity integration with neighboring countries is important for each country's systems, as it benefits their optimization and also has a beneficial impact on the GHG emissions of the sum of the systems, given the weight of renewable sources, particularly hydroelectric power in the region.

2.2.4. Final energy consumption by source

In 2022, total energy consumption was 4,836 ktoe, which implied an increase of 4,836 ktoe. 0.5% in year-on-year terms and 32% compared to the values of a decade ago[115].

The Uruguayan economy has experienced practically uninterrupted growth over the last twenty years, which has led to increased energy demand. The increase in production levels and the development of new energy-intensive activities in industry, particularly in the wood and cellulose sector, led to a significant increase in the demand for energy by industry. The second sector of growth in energy demand was transportation, linked to higher levels of productive activity and an increase in the use of energy for household mobility[116].

FIGURE 13. Final energy consumption by source.



In the year 2022, final energy consumption was led by oil derivatives and in second place by biomass waste (1,922 ktoe and 1,322 ktoe, respectively), with shares of 40% for oil derivatives and 27% for biomass waste. In third place was electricity consumption (1,011 ktoe, 21 %).

113 MIEM (2023): *National Energy Balance 2022.*
114 MIEM (2023): *National Energy Balance 2022.*
115 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
116 Uruguay XXI (2022): *Renewable Energies in Uruguay.*

while the share of firewood and charcoal was 10 % and of biofuels and natural gas was only 1 %[117].

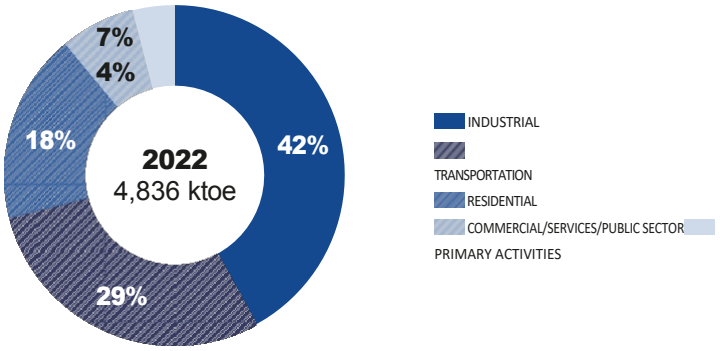
In the case of biomass, its consumption has been present throughout the historical series, with the particularity that it was relatively constant for more than 40 years with an average of 470 ktoe of final energy consumption. It was not until 2007 that it registered an increase that was maintained until 2021, a behavior that was influenced by the consumption of biomass residues. Biomass residues refer to forestry and sawmill residues, black liquor, sugarcane bagasse, rice husks, sunflower husks, barley husks and others[118].

2.2.5. Final energy consumption by sector

Historically, final energy consumption was distributed with similar shares among three sectors (residential, transportation and industrial). The residential sector has always been the sector with the highest consumption. However, as of 1994, the transportation sector became the largest consumer.
the main sector, followed closely by the residential sector, until 2008, when the structure consumption changed again due to strong growth in the industrial sector[119].

Industry in 2022 was the main energy demanding sector with 42% of the total consumed, followed by transportation with 29% and the residential sector with 18%[120].

FIGURE 14. Final energy consumption by sector.



For years, the industrial sector has been the sector with the highest energy consumption, taking into account all sources. The leading industry in terms of consumption is the pulp and paper and cellulose industry, which uses biomass waste to a greater extent. It is followed by the wood industry and, in third place, the cement industry[121].

For its part, the transport sector is responsible for 71% of oil derivatives consumption in 2022.

Electricity consumption totaled 1,011 ktoe in 2022, representing an increase of 2 % year-on-year. The residential sector is the main

117 MIEM (2023): *National Energy Balance 2022.*
118 MIEM (2023): *National Energy Balance 2022.*
119 MIEM (2023): *National Energy Balance 2022.*
120 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
121 Uruguay XXI (2022): *Renewable Energies in Uruguay*.

The industrial sector follows with 30 % and the commercial sector with 28 % of the total[122].

In the international context and considering the Trilemma Index, Uruguay in the year 2022 ranks 14th worldwide and has the best score in the region (followed by Chile, in 26th place). The index incorporates three dimensions: energy security, energy equity and environmental sustainability of the energy system.

2.2.6. Employment

The total employed population in the private energy sector (including transportation) amounts to 83,828 people, of which 14,115 are women (17 %). The age distribution of men and women by subsectors shows that only in the "Production of electricity and heat" the highest concentration is found in older age groups (between 40 and 60 years old). In the other subsectors, women are mainly located between 30 and 50 years of age, and in men it is more varied: in "Services associated with transportation" and "Production of electricity and heat" the highest concentration is in the older age groups (between 40 and 60 years of age).
The "Gas by network" are younger (under 40 years of age), in "Land transport of passengers" are younger (under 40 years of age), and in "Land transport of passengers" are younger (under 40 years of age).
More than half are over 40 years of age, and in "Freight transportation" and "Residential" they are in the intermediate age range (between 30 and 50 years of age)[123].

When completing the information on the Energy Sector with the employment generated in public sector companies, mainly UTE and ANCAP, another 9,213 jobs are observed, 26% of which are women. It is worth mentioning that this information is classified according to ISIC codes and with a different breakdown than that obtained from the Ministry of Labor and Social Security (MTSS)[124].

122 Uruguay XXI (2022): *Renewable Energies in Uruguay.*
123 SNRCC (2021): *Long-term climate strategy for low greenhouse gas and climate-smart development.*
124 SNRCC (2021): *Long-term climate strategy for low greenhouse gas and climate-smart development.*

5. Greenhouse gas emissions overview

Net greenhouse gas emissions (direct and indirect) in Uruguay for 2020 are summarized below, broken down by sector, according to the 2006 IPCC Guidelines.

TABLE 15. National Greenhouse Gas Inventory Summary Report (IPCC 2006 version).

	Emissions (Gg)			Emissions CO_2-eq (Gg) ($_{GWP100\ AR5}$)				Emissions (Gg)					
Categories	CO_2 net	CH_4	N_2O	HFCs	CBP	SF_6	OTHER HALOGENATED GASES WITH CONVERSION FACTOR	OTHER HALOGENATED GASES WITHOUT CONVERSION FACTOR Gg CO_2-eq $_{GWP100\ AR5}$ HFC - 245fa	HFC - 365mfc	NOx	CO	COVDM	SO_2
Emissions and removals national totals	**-3.026**	**767**	**29,3**	**342**	**1,7E-02**	**2,2**	**NO**			**46,0**	**170**	**44,5**	**16,9**
1 - Energy	**6.200**	**4,9**	**0,7**							**44,1**	**155**	**23,5**	**12,6**
A - Burning activities of fuels	6.200	4,9	0,7							44,1	155	23,5	12,6
1.B - Fugitive emissions from fuels	NE	NE								NE	NE	NE	NE
C - Transportation and Carbon Dioxide Storage	NO												
2 - Industrial Processes and Use of Products	**444**	**NO**	**7,4E-03**	**342**	**1,7E-02**	**2,2**	**NO**			**1,6**	**8,7**	**20,9**	**4,3**
A - Mineral Industry	430									NO	NO	NO	IE
B - Chemical Industry	0,2	NO	NO							NO	NO	NO	1,2
C - Metals industry	3,9	NA			NO	NO				8,1E-03	0,1	2,9E-03	3,7E-03
2.D - Use of Non-Energy Fuel Products and solvents	9,8									NO	NO	15,7	NO
E - Electronics Industry				NO	NO	NO							
2.F - Use of Substitute Products for the Substances that Deplete the Ozone Layer				342	1,7E-02								
G - Manufacture and Use of Others Products			7,4E-03	NO	NO	2,2				NO	NO	NO	NO
2.H - Others	NO	NO								1,6	8,6	5,2	3,1
3 - Agriculture, Forestry and Other Land Uses	**-9.671**	**704**	**28,3**							**0,3**	**6,6**		
A - Livestock		690,5	2,6E-02										
B - Earth	-9.889	IE	IE							IE	IE		
C - Aggregate Sources and $_{Non\text{-}CO2}$ Emission Sources on Earth	218	13,9	28,3							0,3	6,6		
D - Others		NO	NO							NO	NO	NO	NO
4 - Waste	**1,1**	**57,7**	**0,3**							**6,0E-04**	**4,9E-05**	**7,5E-03**	**3,3E-05**
A - Waste Disposal Solids		48,6										2,2E-03	
B - Biological Treatment of Solid Waste		0,5	2,8E-02										
C - Incineration and Burning Waste Open	1,1	4,2E-05	6,9E-05							6,0E-04	4,9E-05	5,1E-03	3,3E-05
D - Water treatment and disposal residuals		8,6	0,2									1,9E-04	
E - Others	NO	NO	NO										
5 - Other	**NO**	**NO**	**NE**							**NO**	**NO**	**NO**	**NO**
A - Indirect emissions of $_{N2O}$ from the atmospheric deposition of N into NOx and $_{NH3}$			NE										
B - Others	NO	NO	NO							NO	NO	NO	NO

Emissions expressed in CO_2-eq are estimated by the metric $_{GWP100\ AR5}$. NO: Not Occurring; NE: Not Estimated; IE: Included in another cell; IE in 3B Land is estimated in 3C1b Biomass burning of crops and 3C1c Biomass burning of grassland; in 2.A.1 Cement production SO emissions$_2$ are reported under category 1.A.2 Manufacturing industries.

TABLE 16. National Greenhouse Gas Inventory Summary Report (IPCC 2006 version) - Memo items.

Categories	Emissions (Gg)			Emissions CO2-eq (Gg) (GWP100 AR5)				Emissions (Gg)					
	CO2 net	CH4	N2O	HFCs	CBP	SF6	OTHER HALOGENATED GASES WITH CONVERSION FACTOR	OTHER HALOGENATED GASES WITHOUT CONVERSION FACTOR Gg CO2-eq GWP100 AR5 HFC - 245fa	HFC - 365mfc	NOx	CO	COVDM	SO2
Memo Items													
International Bunkers	**443**	**3,0E-02**	**1,2E-02**							**7,9**	**51,6**	**1,1**	**0,3**
1.A.3.a.i - Aviation international	131	9,17E-04	3,67E-03							0,2	50,8	0,8	1,9E-02
1.A.3.d.i - Navigation international maritime	312	2,93E-02	8,37E-03							7,7	0,7	0,3	0,2
A.5.c - Operations multilateral													

Since 2010, Uruguay has been producing biofuels; these are mainly used in the transport sector in blends with gasoline and diesel. It should be noted that CO_2 emissions derived from these biofuels are not counted in this category, but are reported as informative items in the Energy sector (see the Inventory Document 1990-2020). On the other hand, CH_4 and N_2 O emissions from biofuels are considered for the Land transport category, although they cannot be estimated since the IPCC 2006 guidelines do not provide an emission factor for mobile combustion of these biofuels.

Emissions from wetlands and harvested wood products were also not estimated for this edition; these emissions are expected to be included in the next inventory cycle.

It should be noted that the year 2020 was strongly marked by the global pandemic of COVID-19. As is well known, this had repercussions in all areas, generating unusual and particular variations in each of them.

6. National Greenhouse Gas Inventory for the year 2020

The analysis of the information is based on the sectors and categories proposed in the 2006 IPCC Guidelines.

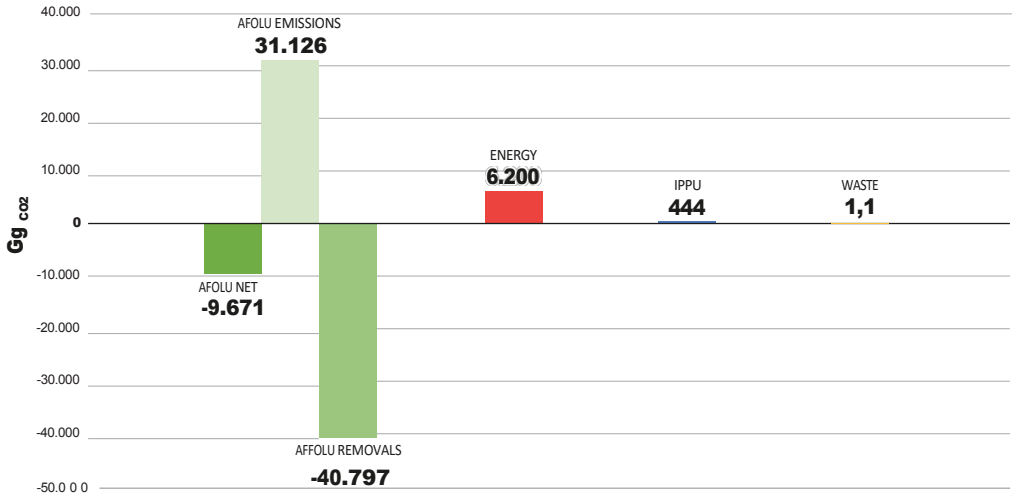
6.1. Carbon dioxide (CO_2)

In Uruguay, a net capture of -3,026 Gg of carbon dioxide (CO_2) was achieved in 2020.

Carbon dioxide emissions (CO_2) come mainly from activities in the Energy sector from the burning of fossil fuels. In 2020, this sector contributed 6,200 Gg. These emissions were calculated using the sec- torial method, also called the "bottom-up" method. Meanwhile, the estimate based on the reference method ("top-down" method) yielded a value for 2020 of 6,316 Gg of CO_2. The difference in the estimates obtained by one method and the other was less than 2%; the gap considered as a difference due to methodological aspects is 5%, which indicates that the sectoral estimate is acceptable.

The IPPU sector contributed 444 Gg, while the Waste sector generated 1.1 Gg of CO emissions$_2$. In contrast, the AFOLU sector captured a net -9,671 Gg of CO_2 (31,126 Gg of gross emissions and -40,797 Gg of gross CO removals).$_2$

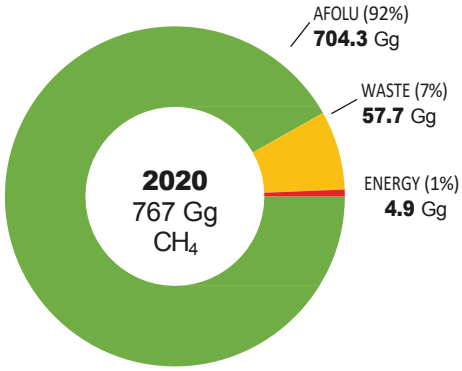
FIGURE 32. National CO emissions$_2$ by sector, 2020.



6.2. Methane (CH_4)

In Uruguay, methane emissions totaled 767 Gg in 2020. They were generated mainly in the AFOLU sector, which accounted for 92% of the total, followed by the Waste sector, which contributed 7% and, finally, the Energy sector with only 1% of total methane emissions.

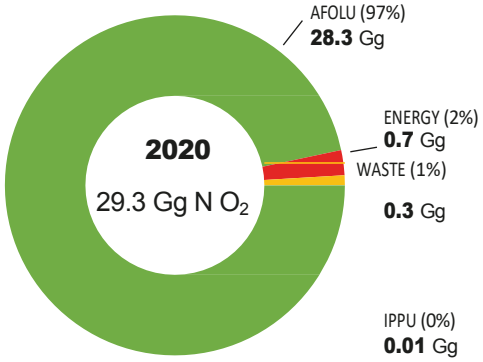
FIGURE 33. National CH emissions$_4$ by sector, 2020.



6.3. Nitrous oxide (N_2O)

In 2020, nitrous oxide (N_2O) emissions were 29.3 Gg. 97% came from the AFOLU sector, 2% from the Energy sector, 1% from the Waste sector and less than 1% from the IPPU sector.

FIGURE 34. National emissions of N_2O by sector, 2020.



6.4. halocarBide and sulfur hexafluoride conSumption

In Uruguay there is no production of HFCs or perfluorocarbons (PFCs), so demand has been met only through imports. Emissions of these gases were produced by their use in applications such as refrigeration, air conditioning, fire extinguishers, insulation foams and electrical transformation, among others.

As a result of the use of HFCs as a substitute for hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs) controlled by the Kigali amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer (main ozone depleting substances) (main ozone depleting substances), the use of HFCs as a substitute for HCFCs and CFCs has been a major source of greenhouse gas emissions.

emissions, particularly in the refrigeration and air-conditioning sector), 342 Gg $_{CO2-eq}$ were emitted in 2020, according to the $_{GWP100\ AR5}$ metric.

Also, for the first time, emissions of PFCs, used in the refrigeration sector, occurred. Estimated emissions were 1.7E-2 Gg CO_2 -eq, according to the GWP100 $_{AR5}$ metric.

Emissions of sulfur hexafluoride (SF_6) were produced from its use in transformer equipment for electric power distribution. These emissions were 2.2 Gg CO2-eq $_{GWP100\ AR5}$ for 2020.

6.5. Relative contribution to global warming

Net emissions for 2020 were 26,546 CO2-eq $_{GWP100\ AR5}$; if the contribution of category 3.B Land is not considered, emissions were 36,436 $_{CO2-eq}$ GWP100 $_{AR5.}$

The following table shows the relative contribution to global warming by gas, considering and disregarding category 3.

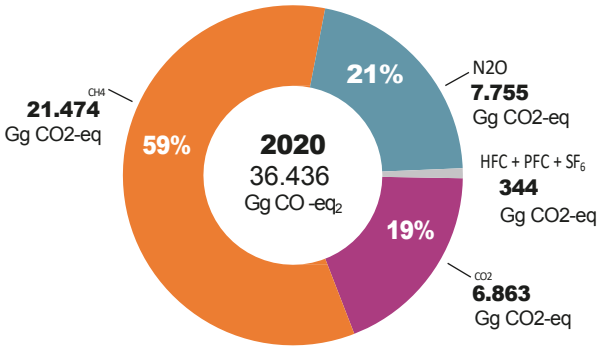
TABLE 17. National net $_{CO2-eq}$ emissions, by gas ($_{GWP100\ AR5}$)

		Gg Gas		Gg CO2-eq $_{GWP100\ AR5}$	
Gas	GWP100 AR5	With 3B. Lands	Without 3B. Land	With 3B. Lands	Without 3B. Land
CO2	1	-3.026	6.863	-3.026	6.863
CH4	28	767	767	21.474	21.474
N2O	265	29,3	29,3	7.755	7.755
HFC-134a	1.300	8,6E-02	8,6E-02	112	112
HFC-125	3.170	3,2E-02	3,2E-02	101	101
HFC-143a	4.800	2,0E-02	2,0E-02	95,3	95,3
HFC-32	677	1,3E-02	1,3E-02	9,0	9,0
HFC-23	12.400	4,1E-07	4,1E-07	5,1E-03	5,1E-03
HFC-152a	138	5,1E-04	5,1E-04	7,0E-02	7,0E-02
HFC-227ea	3.350	6,0E-03	6,0E-03	20,0	20,0
HFC-245fa	858	2,3E-05	2,3E-05	1,9E-02	1,9E-02
HFC-365mcf	804	5,3E-03	5,3E-03	4,3	4,3
PFC-116	11.100	1,5E-06	1,5E-06	1,7E-02	1,7E-02
SF6	23.500	9,4E-05	9,4E-05	2,2	2,2
TOTAL				**26.546**	**36.436**

Net methane emissions expressed in Gg of CO2-eq $_{GWP100\ AR5}$ and without considering category 3B ^{Land3} , represent 59% of total national emissions. Net emissions of nitrous oxide correspond to 21%; those of carbon dioxide to 19% and those of HFCs, PCF and SF6, despite their high global warming potential, represent less than 1% of total national emissions.

3 No emissions from harvested wood products are estimated in Uruguay.

FIGURE 35. Emissions contribution by gas (excluding 3B Land), 2020, GWP100 AR5.



According to the GWP100 AR5 metric, the AFOLU sector generated the largest contribution to total emissions (excluding category 3B Land) with 75%, followed by the Energy sector with 18%, Waste with 5% and finally the IPPU sector with 2% of emissions.

TABLE 18. National net $_{CO2-eq}$ emissions, by sector ($_{GWP100\ AR5}$).

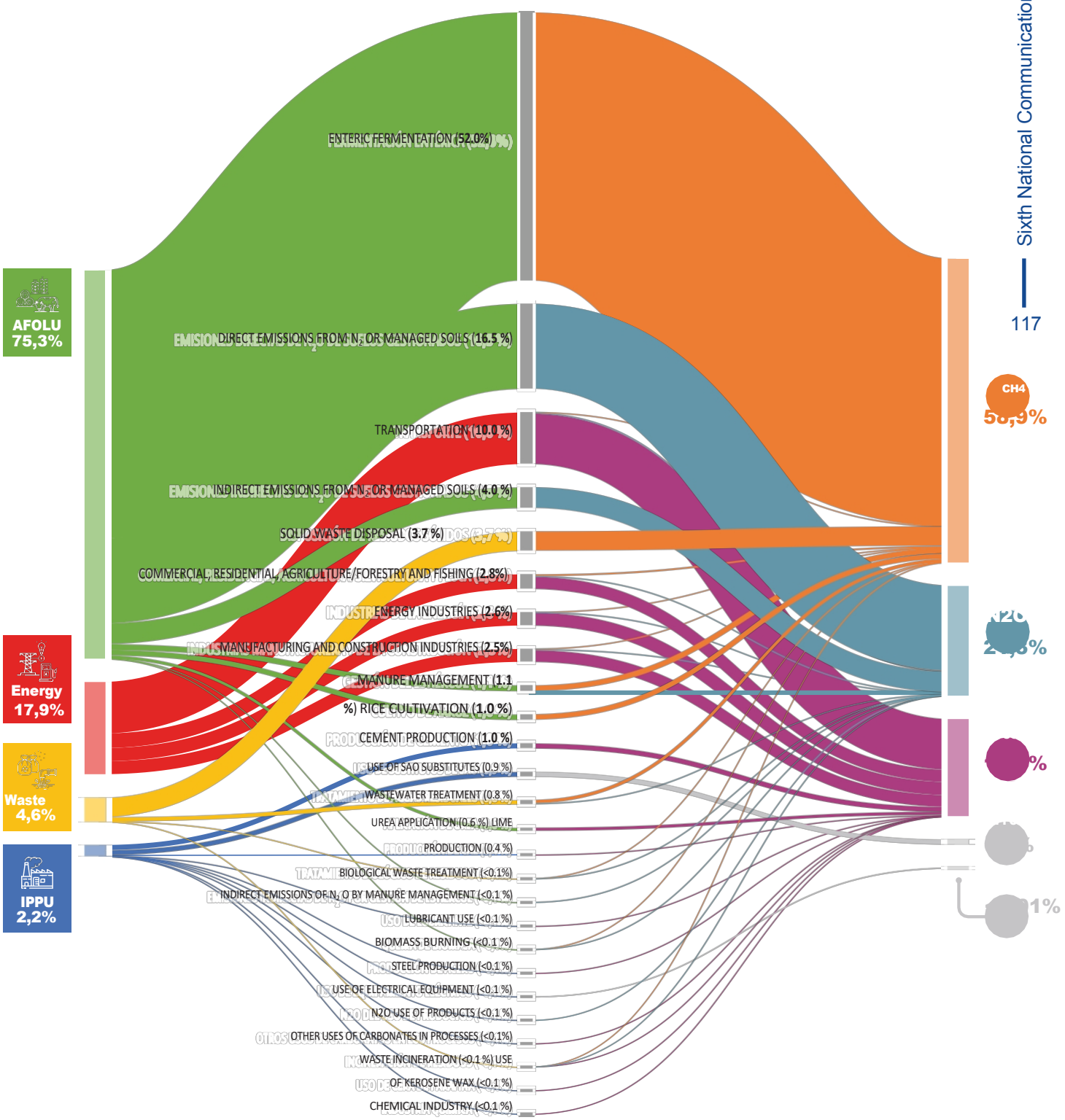
Sector	Emissions Gg CO_2 -eq	Contribution* % Contribution* % Contribution
1. Energy	6.523	18%
IPPU	790	2%
3. AFOLU	17.546	
A. Livestock	19.340	53%
B. Land	-9.889	
C - Aggregate Sources and Non-CO Emission Sources$_2$ on Earth	8.096	22%
3.D - Others (HWP)	NE	
4. Waste	1.687	5%
TOTAL	**26.546**	
Total excluding 3.B. Land and 3.D. HWP	**36.436**	

*B. Land and 3.

B. Land, were: Enteric fermentation (AFOLU) with 52.0 % of national emissions, followed by Direct emissions of N_2 O from managed soils (AFOLU) with a contribution of 16.5 % of national emissions, Fuel combustion in transport (Energy) with 10.0 % of national emissions.

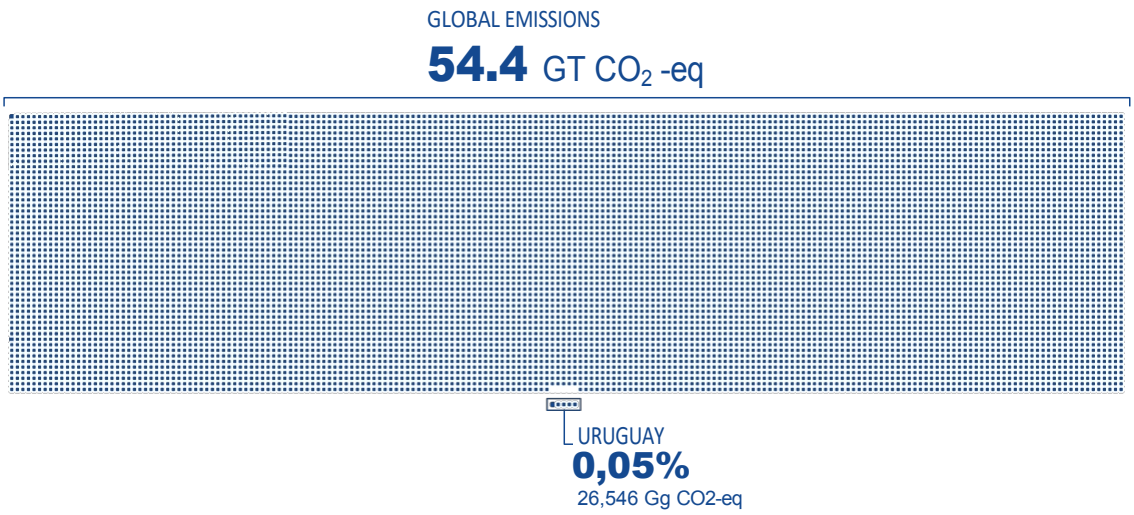
The following graph shows the distribution of emissions by sector, category and gas, expressed as a percentage of total national emissions (excluding category 3.B. Land) in Gg CO2-eq for the metric GWP100 AR5.

FIGURE 36. Distribution of national emissions by sector and category with metric $_{GWP100\ AR5}$, 2020, without 3.



Worldwide, global GHG emissions caused by human activities have increased since the pre-industrial era[4] . Between 1970 and 2010 they increased by more than 80%. In 2020, total net GHG emissions for Uruguay, measured using the 100-year GWP (AR5), were 26,546 Gg CO_2 -eq[5], which represented 0.05 % of global anthropogenic GHG emissions.

FIGURE 37. Incidence of Uruguay's GHG emissions at the global level.



For this estimate, the value of global emissions for 2020 reported by UN6 (54.4 GT $_{CO2-eq}$) was considered.

6.6. Summary of emissions by sector

A summary of the emissions profile by sector is presented below. Information detailed information can be found in the Inventory Document 1990-2020. Energy

Sector

The main gas in the Energy sector for 2020 under $_{GWP100\ AR5}$ metrics was $_{CO2}$, accounting for 95% of emissions.

TABLE 19. Contribution to total GHG emissions from the Energy sector, 2020.

Gas	Emissions (Gg of Gas)	GWP100 AR5	Emissions GWP100 AR5 (Gg CO_2 -eq)
CO2	6.200	1	6.200
CH4	4,9	28	138
N2O	0,7	265	185
TOTAL SECTOR			**6.523**

4 IPCC, Climate Change 2014, Trends in stocks and flows of GHG and their drivers. Working Group III contribution to the IPCC Fifth Assessment Report.

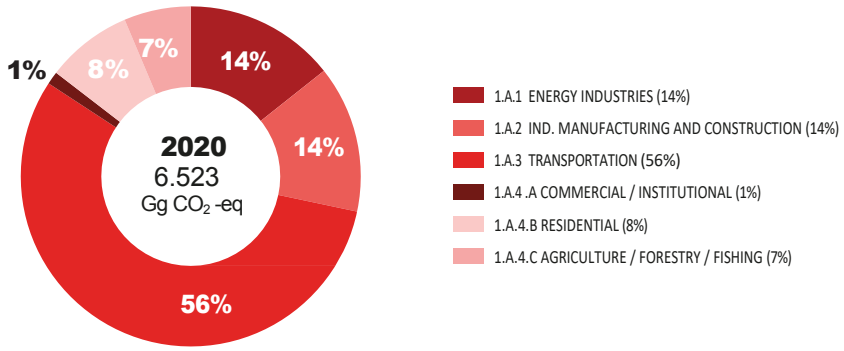
5 Includes total net emissions of all direct GHGs: $_{CO2}$, $_{CH4}$, $_{N2O}$, HFCs and $_{SF6}$.

6 UN environment Emissions Gap Report, 2022: https://www.unep.org/resources/emissions-gap-report-2022

Regarding the distribution of each subcategory using the $_{GWP100\ AR5}$ metric, the one with the highest emissions was transportation (3,646 Gg CO_2 -eq), followed by energy industries (935 Gg CO_2 -eq) and manufacturing and construction industries (912 Gg CO_2 -eq). To a lesser extent, emissions from the residential (535 Gg CO_2 -eq); agriculture / forestry / fishing (415 Gg CO_2 -eq), and commercial / institutional (80 Gg CO_2 -eq) sectors were recorded.

For the present inventory it was analyzed based on the 1990-2019 series whether the fuel emissions qualified to be considered insignificant and therefore to be reported as NE in the INGEI. In accordance with the requirements established in Decision 18/CMA 1 of the Paris Agreement MPDs, it was verified that the emissions of the category are below 0.05 % of the total national GHG emissions (in CO_2 -eq), do not exceed 500 Gg CO_2 -eq and that, in aggregate, the emissions not estimated for insignificance do not exceed 0.1 % of the total national GHG emissions (excluding LULUCF).

FIGURE 38. Relative contribution of GHG emissions from the Energy sector by category, 2020 ($_{GWP100\ AR5}$).



Detailed information on the Energy sector is presented in the Inventory Document 1990-2020.

2. Adaptation

Adaptation measures, programs and projects implemented or in progress

In terms of *adaptation to climate change,* Uruguay continues to promote actions from different areas and sectors, working jointly with multiple stakeholders.

The First Nationally Determined Contribution (NDC1, horizon 2025) has identified specific adaptation contributions guiding efforts towards the overall Adaptation goal of the Paris Agreement to increase adaptive capacity, strengthen resilience and reduce vulnerability. The section on adaptation is considered the country's first Adaptation Communication, corresponding to Articles 7.10 and 7.11 of the Paris Agreement. In it, the contributions were organized into priority areas for climate change policy such as: social, health, disaster risk reduction, cities and infrastructure, biodiversity and ecosystems, coastal zone, water resources, agriculture, energy, tourism and climate services. At the end of this section, a summary of the main advances of CDN1 is presented.

In the Second Nationally Determined Contribution (NDC2, horizon 2030), submitted in December 2022, it sets out adaptation objectives and corresponding actions. In order to link national adaptation efforts with the elements established in the Global Goal on Adaptation (GGA), ComAd2 has defined general objectives and specific objectives for each adaptation area and, in addition, an effort has been made to establish the qualitative contribution of each of the proposed adaptation actions in order to establish a strategic framework for their implementation. The general objectives are:

In relation to the increase in adaptive capacity:

> **a)** Strengthen information systems for decision-making, generating, incorporating and improving information, with technical and scientific validation, related to the consequences of climate change and the implementation of adaptation actions.

In relation to vulnerability reduction:

> **b)** Reduce the impacts of climate change on socio-ecological systems; reducing losses and damages in the various productive areas and sectors, through the implementation of actions to adapt to climate change.

In relation to strengthening resilience:

> **c)** Strengthen partnerships for climate governance, regulatory, planning and technical instruments, with a cross-cutting approach to climate change, especially adaptation.

In relation to adaptation measures, priority is given to giving continuity to those actions initiated in ComAd1 that require greater precision and/or moving on to the next stage, emphasizing the measures proposed in the National Adaptation Plans.

and reinforce the needs found in some of the areas of adaptation. In addition, social commitment, the risk reduction approach and the inclusion of the gender perspective are mainstreamed in all measures. The measures are organized into two major groups:

- Transversal Measures, which correspond to Climate Information and Services, Disaster Risk Reduction, Losses and Damages, Migrations and Displacements.
- Measures related to the main areas of adaptation: Health, Cities, Infrastructure and Land Use Planning, Biodiversity and Ecosystems, Coastal Zone, Water Resources, Agriculture, Energy, Tourism.

Uruguay also decided to include a section on adaptation, resilience and risk reduction in its LCA for the following reasons. First, because increasing adaptive capacity and resilience to climate change and reducing the risks it entails is a national priority and should therefore be a substantial aspect to be integrated into a long-term planning process. Secondly, because Uruguay needs to make progress in sizing and making explicit the possible and necessary efforts and actions to strengthen adaptation, resilience and reduce the risk of climate change; and thirdly, because Uruguay seeks to contribute to the strengthening of a global governance that registers a political parity and mobilization of financial resources between adaptation and mitigation of climate change, for which it is strategic to direct efforts that contribute to the design of the Global Adaptation Goal and the Global Balance provided for in the Paris Agreement[28]. In turn, it is worth mentioning that, through efforts to increase adaptive capacity, resilience and risk reduction, Uruguay contributes to the objective of the Paris Agreement indicated in paragraph 1.b of Article 2: "To increase adaptive capacity to the adverse effects of climate change and promote climate resilience and low greenhouse gas emissions development, in a manner that does not compromise food production". In fact, the LCA seeks to reflect this contribution and connect these efforts with the Global Adaptation Goal (GAT), calling for the importance of providing information that facilitates the realization of the Global Adaptation Balance[29].

Uruguay is a country highly vulnerable to climate change and variability and, according to climate projections prepared within the framework of the National Adaptation Plans, the intensity and frequency of associated extreme events will increase. For this reason, the country saw the need to incorporate and make explicit the country's needs in this area in the different planning processes in the area of climate action, whether or not they have adaptation as a central focus[30].

28 SNRCC (2021): *Long-term climate strategy for low greenhouse gas emissions and climate-resilient development.*
29 SNRCC (2021): *Long-term climate strategy for low greenhouse gas emissions and climate-resilient development.*
30 SNRCC (2021): *Long-term climate strategy for low greenhouse gas emissions and climate-resilient development.*

National Adaptation Plans (NAPs)

Uruguay has focused its national adaptation planning strategy on priority areas for climate vulnerability. In this sense, the country has defined among its priorities the development of national adaptation plans of a sec- torial and territorial nature, as reflected in the measures presented in Uruguay's CDN1 that contemplate the design and implementation of these plans:

- By 2020, the National Adaptation Plan for Cities and Infrastructure has been formulated, approved and implementation has begun, including a focus on the right to the city, urban sustainability and access to urban land.
- By 2020, the National Coastal Adaptation Plan has been formulated, approved and implementation has begun.
- As of 2020, the National Agricultural Adaptation Plan has been formulated, approved and is being implemented.
- As of 2025, a Plan has been formulated, approved and implementation has begun.
  National Energy Adaptation.
- As of 2025, a Plan has been formulated, approved and implementation has begun.
  National Health Adaptation.

To date, the National Adaptation Plan for the agricultural sector, the National Adaptation Plan for cities and infrastructure, and the National Adaptation Plan for the Coastal Zone have been approved. Work has also begun on the formulation and implementation of the National Adaptation Plans for the Energy and Health sectors.

National Plan for Adaptation to Climate Variability and Change for the Sector Agriculture and Livestock (PNA Agro)

As reported in 5CN, the National Plan for Adaptation to Climate Variability and Change for the Agricultural Sector (PNA Agro) was presented in 2019 as a strategic instrument to guide the sector's public policies with a long-term vision of the productive, environmental, social and institutional dimensions. It proposes a short-term action plan (2020-2025) that prioritizes concrete adaptation measures on the development and transfer of technology, information systems, climate insurance, productive infrastructure, the promotion of good practices, the strengthening of producer networks and organizations, and institutional capacities. The NAPA Agro also includes a proposal for 32 adaptation indicators for monitoring and evaluating the Strategy up to [205031]. It is important to mention that the NAPA Agro was presented at COP 25 in Madrid and was incorporated into the Convention's Central Registry of NAPAs.

It should be recalled that the NAP Agro includes the gender perspective as a cross-cutting issue and addresses the role of rural women in particular, and in its Action Plan, it includes a gender perspective as a cross-cutting issue.

31 The NAPA Agro preparation project was part of the Global Program for the Integration of Agriculture into National Adaptation Plans, led by the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Development Program (UNDP) with financial support from the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Security. The strategic direction of the NAPA Agro Preparation Support Project consisted of MGAP, MVOTMA, OPP, AUCI, UNDP and FAO.

In addition, the 2025 horizon also incorporates specific measures such as gender mainstreaming actions in policies to support family production; the implementation of affirmative policies focused on women and rural youth; the emphasis on the integration of women as target beneficiaries within the framework of promoting the adoption of Good Agricultural Practices and the integrated management of pests, diseases and weeds[32].

In 2022, a monitoring of the matrix of indicators and the action plan was carried out. The exercise showed the need to strengthen statistics and indicators and the ability to provide continuity to monitoring and verify that the indicators are capturing the particularities of climate change adaptation in the agricultural sector[33].

With respect to the 2025 action plan, the evaluation of the Agro NAP identified a number of challenges: a) implementation was affected by both changes in funding sources and budget availability; b) some measures were difficult to evaluate since the work plans do not have specific quantifiable targets; c) the most common barriers identified during the process of evaluating the implementation of the NAPA Agro action plan are the lack of institutional capacities, lack of funding sources, difficulties in institutional articulation, barriers to the adoption and transfer of technologies for productive systems adapted to climate variability and change[34].

It is worth noting that a series of initiatives and projects were implemented with an institutional integration approach, which at the same time seek to improve the resilience of production systems, promoting agro-ecological transitions that improve the use and conservation of natural resources, improve the living conditions of people working in the sector and at the same time provide benefits in terms of GHG emission reductions[35].

32 SNRCC (2022): *Second Nationally Determined Contribution to the Paris Agreement. Eastern Republic of Uruguay.*
33 SNRCC (2022): *Second Nationally Determined Contribution to the Paris Agreement. Eastern Republic of Uruguay.*
34 SNRCC (2022): *Second Nationally Determined Contribution to the Paris Agreement. Eastern Republic of Uruguay.*
35 SNRCC (2022): *Second Nationally Determined Contribution to the Paris Agreement. Eastern Republic of Uruguay.*

The following are some of the lines of work implemented since the launching of PNA Agro[36]:

- Progress in research lines in integrated work with INIA and the University of the Republic that generate inputs to contribute to the development of production systems that are less vulnerable to climate.
- Creation of the National System for Innovation and Rural Development (SNIDER) to direct, articulate and coordinate the design and implementation of the different actions aimed at Sustainable Rural Development.
- Generation of information and monitoring of the agro-climatic situation to improve decision-making for climate risk management in agricultural establishments. In particular, the monthly monitoring of indicators such as available water in soils, precipitation and its anomalies, the Normalized Difference Vegetation Index (NDVI), the Standardized Precipitation Index, the Forestry Risk Index and the Bovine Heat Stress Index, among others, stand out. This is a joint work with the National Agricultural Information System of MGAP (SNIA), the Agro-climate and Information Systems Unit of INIA (GRAS Unit) and the Uruguayan Institute of Meteorology (INUMET).

Main adaptation projects being implemented in the agricultural sector:

- The year 2023 marks the beginning of the implementation of the "Sustainable Livestock Farming in Uruguay" project (European Union, Euroclima LAC), which seeks to contribute to strengthening the sustainability of livestock farming in Uruguay and the regeneration and conservation of the natural countryside, promoting best practices to be resilient to the impacts of climate change and variability, taking into account gender and generational considerations. This initiative proposes the following specific objectives: a) to develop a monitoring system for livestock farming that contributes to the design, adaptation and implementation of public policies related to sustainability and climate change, such as the Nationally Determined Contributions, the livestock environmental footprint and other ongoing initiatives, b) to contribute to capacity building in the country for the sustainability of livestock farming and the conservation and regeneration of the natural countryside, and c) to contribute to the development of a sustainable livestock sector in Uruguay.

  c) support the implementation of good farming practices and their dissemination. Its implementation begins in 2023 and will last for 4 years.
- In 2022, the "Agroecological and Resilient Agroecological Systems in Uruguay (SARU) "[37] project began to be implemented with the objective of "Strengthening institutional capacities to improve public policies and public services in the areas of climate change and agroecological transition".

  It will implement actions in line with national climate action policies, including climate change adaptation priorities outlined in the NAPA Agro that contribute, at the same time, to farm sustainability processes through the promotion of biodiversity in the farm system, maintenance or restoration of biodiversity in the farm system, and the development of a sustainable farm system.

36 SNRCC (2022): *Second Nationally Determined Contribution to the Paris Agreement. Eastern Republic of Uruguay.*
37 On March 23, 2022, IBRD Loan Agreement No. 9305-UY was signed between the Government of the Oriental Republic

of Uruguay and the International Bank for Reconstruction and Development (World Bank), for the execution of the project for the construction of a new building in the Eastern Republic of Uruguay.
to "Agroecological and Resilient Systems in Uruguay" (SARU). For more information ANUARIO OPYPA p. 395 Project Agroecological and Resilient Systems in Uruguay - SARU Project Management Unit (UGP-MGAP).

The company will also promote the protection and efficient use of natural resources, conserving or increasing ecosystem services. Synergies with the reduction of GHG emissions and/or the improvement of carbon balances, tending towards neutral or carbon sequestration balances, are expected to be enhanced.

Among the main actions foreseen in the project, the following stand out:

1. The development of a National Natural Resources Management System, the contracting of consulting services for the development and evolutionary improvements of the system, which are aimed at achieving productive systems that are better adapted to climate variability, is foreseen.
2. Agricultural risk management and development of risk transfer solutions. In order to provide sufficient, timely and transparent information on environmental impacts and climate variability, a decision support system will be built to help assess and monitor agro-climatic risks in Uruguay.
3. Generation of indicators related to agriculture and the environment. Focusing on improving the capacity to track the impact of the agricultural sector on natural resources and tracking indicators towards better reporting of Uruguay's contributions to the Paris Agreement, through innovative work in environmental accounting, generation of a National GHG Inventory and development of a better set of environmental indicators related to mitigation and adaptation.
4. Improvement of water quality in the Santa Lucía river basin This action will be carried out by the General Directorate of Natural Resources (DGRN).

The SARU project will allow[38]:

1. Provide sufficient, timely and transparent information on environmental impacts and climate variability, especially to improve adaptive capacity for agro-climatic risk management, making it possible to link forecasts and extreme events with their potential and actual impact on agricultural production and production chains.
2. Develop environmental accounting and conduct ex ante and ex post evaluations of various agricultural technologies incorporating the environmental dimension.
3. Generate policies and incentives for agricultural producers to adopt sustainable intensification technologies and practices associated with environmentally friendly management of natural resources.
4. Consolidate policies that incorporate the promotion of an agroecological transition.
5. Promote the incorporation of good practices in production systems.
6. Ensure compliance with minimum animal welfare standards.

38 MGAP - OPYPA (2022): *OPYPA Yearbook*. Pág.395. Agroecological and Resilient Systems Project in Uruguay - SARU.

A preliminary gender gap analysis was also developed to inform project design. Based on the analysis, the objective is to ensure that women's needs and concerns are considered so that targeted women can effectively participate in project activities and fully benefit from their participation, and that the project contributes to the reduction of gender gaps.

The SARU Project's goal is to directly benefit 17,400 people, 30% of whom will be women. To date, progress has been made in insurance, the 1:40.000, the entry into force of the National Agroecology Plan, the launching of calls for proposals at the territorial level (Agroecological Transitions and Call for Proposals for the Santa Lucía River Basin), the increase in the area under sustainable management of natural resources (Soil Use and Management Plans, Sustainable Dairy Plans, Agrochemical Management and Monitoring), actions coordinated with the MGAP Gender Commission (PNG Agro), among the most important.

The aim is to develop information systems that enable producers and public policy makers to anticipate climate change resilience measures and support the development of agroecology. It also seeks to develop public goods to support policies that encourage adaptation and mitigation of climate change, continuing and strengthening actions related to carbon balance and water quality in the work agenda. Examples of public goods are the promotion of the adoption of climate-smart technologies, digital technologies applied to agriculture, ICTs, biological control, organic and bionatural inputs, among others, which contribute to the permanence and resilience of production systems in rural territories.

- From 2019 to 2023, Uruguay developed the project "Climate-smart livestock production and land restoration in Uruguayan pastures "[39] . This project aimed to contribute to meeting the challenges of the livestock sector through a comprehensive approach that includes improving the productivity and sustainability of livestock farms. The implementation of the project made it possible to increase the production of livestock systems on natural pastures and, at the same time, reduce GHG emissions per kilogram of meat, increasing the resilience of the systems that showed a lower impact to the successive droughts that occurred during the intervention period. The hypothesis is that these production systems favor carbon sequestration in pasture soils and the restoration of ecosystem services, although these results are not yet available. The technological proposal consists of avoiding overgrazing in order to improve the forage production of the natural field and to match the energy requirements of the herd with the seasonal forage production curve, thus allocating most of the energy consumed to meat production instead of maintenance. The project adopts the co-innovation approach; this way of working promotes the active participation of the producers.

39 It is financed by the Global Environment Facility (GEF) and executed by the MGAP in collaboration with the MA and with the technical and administrative support of FAO. It also has a strong link with the National Agricultural Research Institute (INIA) and the Faculty of Agronomy of UDELAR.

The technological proposal demonstrated that it is possible to increase productivity in a sustainable manner, reduce climate vulnerability and reduce gross or net emissions (emissions minus sequestration or per unit of product). The technological proposal demonstrated that it is possible to increase productivity in a sustainable manner, reduce climate vulnerability and reduce gross or net emissions (emissions minus sequestration) or per unit of product. The project also developed a national sustainable livestock strategy with lower net greenhouse gas emissions than at present, which is more resilient and efficient. The strategy was developed in a participatory manner with the sector's institutions, including the public and private sectors, academia and producer organizations, incorporating an intergenerational approach and a gender perspective.

The results of this process provide scientific data for the design of public policies, inputs for the participatory construction of sustainable livestock production, as well as the calibration of national factors for the estimation of sustainability indicators, which allow the characterization and communication for the positioning of national meat production[40].

- In August 2022, the directorates of MGAP, MA, INIA, INAC, IPA, SUL, Mesa de ganadería sobre campo natural and the Faculty of Agronomy agreed on the general objective and the thematic areas of the National Strategy for the Sustainable Development of Livestock. Uruguay, a livestock-raising country par excellence, wishes to incorporate the climate dimension explicitly, in terms of adaptation and mitigation. In other words, livestock farming that increases the productivity and income of producers while reducing climate vulnerability and mitigating climate change. The strategy is accompanied by a Livestock Mitigation Plan, which identifies actions for efficient production in terms of greenhouse gas (GHG) emissions and the promotion of carbon sequestration potential in pasture soil, among others. This strategy is aligned with the international commitments of which Uruguay is a signatory and with other initiatives that are already being developed. The development of the Livestock Strategy and the Mitigation Plan was an opportunity for dialogue and exchange among the relevant actors in the sector to ensure the coordination of long-term initiatives at all levels of the chain[41].
- The Development and Adaptation to Climate Change Project (DACC) began in 2012 with financing from the World Bank (WB) and its implementation period ended in 2022. Its objectives were to improve natural resource management, reduce the impact of climate variability and improve competitiveness in the agricultural sector. A key component of the project was the promotion of investments in sustainable natural resource management measures that generate greater capacity to adapt to climate variability and change in family and medium-sized producers, through convening events held by the DGDR. The DACC Project supported close to 4,000 products.

40 MGAP - OPYPA (2022): *OPYPA Yearbook.* Improvements in production, economics and environmental performance of livestock systems in the first two years of the Livestock and Climate project. S. Dogliotti, P. Soca, G. Piñeiro, J. Piñeiro, S. Scarlato, I. Paparamborda, V. Figueroa, L. Torres, M. Abrigo, C. Jones, V. Balderrín, L. Pais, C. Márquez, F. García, S. Bergós.

41 More information here.

The project focused on the northern and central-northern regions of the country, in addition to training an additional 7,500 producers and rural workers to improve their adaptive capacity. Another component of this project was the strengthening of institutional capacities for the rational use and management of natural resources. The strengthening of the DGRN resulted in improved natural resource management based on the development of new soil mapping and the implementation of land, water and natural field use and management plans.

- The Rural Productive Development Program (PDPR) began to be implemented in 2012, is financed by the Inter-American Development Bank (IDB) and its current execution period ends in 2023. The general objective is to contribute to improving the income of small and medium-sized producers, seeking to increase their productivity through the adoption of new technologies. It offers support to producers through technology transfer, the promotion and development of adaptive technologies, and institutional strengthening. WB financing, through the DACC Project, and IDB financing, through the PDPR, are two sources of public financing that support the implementation of adaptation measures.
- In 2021, the project *"Post COVID-19 Green Reco- very for Food, Health, and Water Security strengthened by financial and technological innovations in Latin-American countries"* began to be implemented. It is a Regional *Readiness* project of the Green Climate Fund (GCF) and involves the following countries: Ecuador, Brazil, Guatemala, Peru, Colombia, Mexico, Uruguay and Bolivia.

The aforementioned project seeks to contribute to overcoming institutional, technical and financial barriers in the agricultural sector, specifically for medium and small farmers, through national public institutions linked to the environment, agriculture and the economy, to promote the adoption of advanced technologies that will accelerate economic recovery and job creation, and improve the livelihoods of producers while reducing CO_2 equivalent emissions in the face of the global pandemic. In the case of Uruguay, as a result of the aforementioned project, work is beginning on an initiative focused on innovation in adaptation to climate change in the fruit and vegetable sector.

National Adaptation Plan for Cities and Infrastructures (PNA Ciudades)

The National Adaptation Plan for Cities and Infrastructure (NAP Cities) was presented in 2021, both at the national level and at the international level, the UNFCCC and COP26. The overall objective of the Cities NAP is to reduce the vulnerability of communities to the effects of climate variability and change by building adaptive capacity and resilience in cities, infrastructure and urban environments; integrating adaptation measures into existing and new policies, programs and activities, and into national and local planning processes and strategies, in order to improve the quality of life of the population.

The plan lays the groundwork for building adaptive capacity and resilience in urban centers, protecting critical and essential infrastructure and urban environments, facilitating the integration of climate change adaptation into policies, programs and activities, with a focus on reducing existing and future risks to socio-natural phenomena that may be potentiated by climate change.

The Plan is structured into seven guiding principles, four key concepts, one general objective and five specific objectives, from which the respective adaptation measures are derived, which in turn are grouped according to five strategic lines that stem from each specific objective.

SO1: Deepen the adequate incorporation of mitigation and adaptation to vulnerability and climate change in urban planning, land-use planning instruments and landscape.

SO2: Adequately integrate mitigation and adaptation to climate variability and change and ecosystem services in the design, construction, management and maintenance of housing, infrastructure, equipment and provision of public services.

SO3: Consolidate Integrated Disaster Risk Management from a pro- pective, corrective and compensatory approach for recovery and decision making that will allow "building back better" and reorient planning processes by acting on the pre-existing causes of risk.

SO4: Strengthen capacities at the national, departmental and municipal levels, through the training of human resources and the financing of actions, as appropriate in terms of budgetary competencies at the respective levels of government, related to mitigation and adaptation to climate variability and change in cities, communities and human settlements.

SO5: Promote sustainable forms of production and consumption, increasing efficiency in the use of resources.

The guiding principles and key concepts of the Cities NAP transcend the proposed objectives and measures in a cross-cutting manner. It is understood that this structure provides a more comprehensive approach, allowing it to be adaptive and flexible, incorporating the generation of knowledge and information as a public good, which allows it to be sustainable. The approach has a strong commitment to the incorporation of the Gender and Generations perspective, with a human rights approach, which encourages participation, promotes transparency and open government, with a decentralized character at the time of planning and implementation of the corresponding measures.

The key concepts that structure the Cities NAP refer to the territorial approach to adaptation, integrated water resources management, the use of nature-based solutions, and the use of co-benefits between adaptation actions and climate change mitigation.

Since adaptation is a long-range task, Strategy 2050 is operationalized through five strategic lines (Land use and planning in cities, Changes in urban habitat, Comprehensive emergency and disaster risk management, Capacity building, awareness raising and communication, Transition to sustainable forms of production and consumption) that group 41 measures with medium- and long-term time frames. This strategy will be implemented through the formulation of five-year action plans. In its presentation, the Cities NAP includes an Action Plan 2021-2025 that contemplates the development of activities to the year 2025 and proposes selected targets and indicators to monitor the progress of the Plan.

It is important to mention that the Cities NAP focused on cities with more than 10,000 inhabitants (40 cities, including Montevideo). However, cities with smaller populations but high climate vulnerability were also considered.

Among its main achievements and advances are the progress made in institutional processes such as the preparation of departmental plans for integrated risk management, climate action, rainwater and urban water drainage, and tree-planting plans and ordinances, among others.

In the area of education and training, we were able to promote lines of work for research, teaching and extension related to adaptation to climate variability and change (AVCC). Among these are some of the following: regular courses, professional training activities, continuing education and non-formal education, research programs on climate, public spaces and buildings, sustainable drainage, nature-based solutions (NBS), new technologies and materials, and the design of specific projects.

As part of the main lessons learned and good practices, the articulation of adaptation processes stands out as key to ensure their implementation and continuity. During the NAP Cities process, many of the enabling conditions were prepared for the development of the activities of the Uruguay-Argentina Regional Project: Adaptation to Climate Change in Cities and Vulnerable Coastal Ecosystems of the Uruguay River, to be implemented between 2021 and 2024 and constituting an opportunity to apply and evaluate AVCC measures.

The Uruguay-Argentina Regional Project, as an articulating instrument between planning and implementation of adaptation, includes actions such as: the diagnosis and restoration of key ecosystems for adaptation; the strengthening of territorial networks to increase resilience in vulnerable communities; and the re-signification of land located in areas at high risk of flooding through the creation of public parks.

One of the best practices to be highlighted focuses on ensuring the continuity of the technical approach to the planning work, articulated with implementation. In this regard, it should be noted that the technical committee for the review and formulation of the Cities NAP,

The project will assume a promotion and implementation role, as a driving group made up of representatives of the State institutions involved in the issue.

The Cities NAP, in addition to incorporating the gender perspective and generations with a human rights approach as a guiding principle of the document, categorizes all measures according to their potential impact on gender inequalities. Within the interactive tool for monitoring the 41 measures of the Cities NAP, it is possible to see the relationship of the measures with: their potential impact on gender inequalities, threats, strategic lines, departments and localities.

With respect to the EbA and BNS approach, within the framework of the Cities NAP, a guide to key ecosystems for adaptation in Uruguayan cities to cope with floods, coastal erosion and high temperatures was generated, particularly for use in territorial planning instruments such as local plans. This is a starting point for strengthening baseline information on ecosystem services for climate change adaptation in cities. The Uruguay-Argentina regional project includes among its expected results the generation of evidence regarding the benefits of BNS for adaptation, both at the micro scale, with the implementation of green and blue infrastructure in a city in Uruguay, and at the macro scale, with the incorporation of adaptation measures in a protected area, under the concept that maintaining ecosystems in a good state of conservation increases resilience at the territorial level.

Among its main barriers and challenges, one of the main challenges refers to the formulation, coordination, implementation and monitoring of the five-year action plans that follow up, promote and implement the adaptation actions identified and prioritized at the time of their elaboration. This can only be achieved by maintaining the principle of flexibility and adaptive management of the plan, the focus on improving knowledge and continuous monitoring, evaluation and learning from each implementation cycle.

Another relevant challenge is linked to the continuity of partnerships and the allocation of resources, through future changes in administrations and political authorities that may occur during the implementation horizon of the Cities NAP.

In some institutions, changes in administration and authorities have brought about changes in priorities and discontinuity in certain key adaptation activities; in some cases, after a period of slowing down, the technical teams are resuming them, favoring continuity in climate policies and commitments.

It is also pertinent to point out that there are lines of work that still need to be prioritized. In particular, the development and application of guidelines for the planning or implementation of HCV measures in different fields and the carrying out of studies on different topics.

National Adaptation Plan for the Coastal Zone (PNA Costas)

In 2017, the process of preparing the National Adaptation Plan for the Coastal Zone (PNA Costas) was initiated and in 2021 it was approved and presented at COP26.

The process of preparing the National Adaptation Plan for the coastal zone was part of a project led by the MA, with support from the Spanish Agency for International Development Cooperation (AECID) through the Arauclima Program and the Climate Technology Center and Network (CTCN) of the United Nations Framework Convention on Climate Change.

The main objective of the Coastal NAP focuses on strengthening the capacities of institutions to identify impacts and vulnerabilities to climate change and to strengthen the capacities of both government institutions and the rest of the stakeholders involved to define concrete adaptation strategies and actions in the coastal zone to address these impacts. In particular, the plan was to: **a)** incorporate an adaptation perspective in the development and implementation of the coastal zone policy framework, **b)** strengthen capacities at the national, departmental and municipal levels related to climate risk management and adaptation in coastal ecosystems through the training of human resources and the financing of specific actions, and **c)** promote the preservation of coastal natural spaces and processes threatened by climate change and variability.

The plan includes 60 measures contained in five lines of action: **1)** deepening of knowledge and search for technological solutions, **2)** capacity building for vulnerability reduction, **3)** land use and coastal planning, **4)** tourism management, and **5)** restoration and recovery.

Among the actions carried out in the formulation of the Coastal NIP, the following stand out: the creation of a matrix based on existing databases in the country, with relevant and georeferenced information for the assessment of the vulnerability of the coastal zone; the development of a historical database of maritime dynamics along the Uruguayan coastal zone; hazard assessments of these dynamics and projections at 72 points in the coastal zone, with information on average and extreme waves, sea level and currents. Workshops have also been held with managers of the coastal departments to evaluate the perception of the vulnerability of the coastal zone to climate variability and change and the analysis of possible adaptation measures, as part of a participatory construction process.

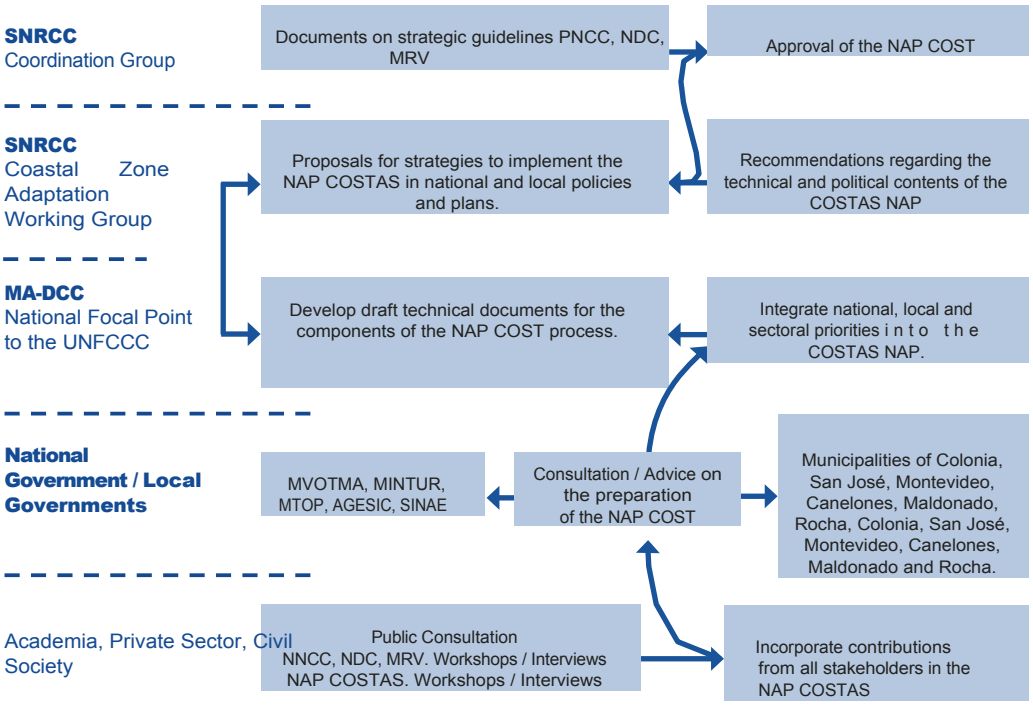
Actions have been taken to obtain a better understanding of coastal processes and their relationship with climate variability and change, both in general (e.g., studies focused on the vulnerability of the coastal zone caused by the combination of sea level rise and climate extremes) and with a sectoral perspective (e.g., economic evaluation of coastal properties).

The Coastal NIP also aims to contribute to sustainable development with an equity perspective, seeking a more resilient, adapted and aware society in the coastal zone. In particular, it integrates a cross-cutting gender and equity perspective.

generations following the SNRCC Gender and Climate Change Strategy. In this regard, in 2022, workshops were held in 5 pilot sites (La Paloma, Piriápolis, Atlantida, Playa del Cerro and Kiyú) with the objective of generating recommendations from a gender perspective, to be considered in climate change adaptation measures. The aim was to help women visualize and identify their specific risks in the face of climate change as a result of their gender roles, which affects their mobility, forms of employment and uses of public space, among others. Based on this, recommendations were generated for the types of adaptation measures proposed in the PNA Costas, with a focus on women, to address these needs.

Within the framework of the NAP-Coasts, the SNRCC is committed to strengthening technical and institutional capacities at different levels with a view to medium- and long-term planning and to implementing adaptation measures in the coastal zone of the departments of Colonia, San José, Montevideo, Canelones, Maldonado and Rocha. This and other issues related to the implementation of the PNA Costas will be discussed in more detail in Chapter 4 in section 4.3 "Education, awareness raising and capacity building".

FIGURE 3. Diagram.



To date, the country has eleven sites selected for their vulnerability to climate variability and change. Criteria were used for this selection: first, the pre-selection made by the departmental governments within the framework of the PNA Costas focused on the studies carried out through international cooperation (Institute of Hydraulics of the University of Cantabria) and the capacities generated at the national level (Institute of Fluid Mechanics and Environmental Engineering of the University of the Republic) were taken into account. Secondly, the results of the aforementioned population and ecosystem vulnerability analyses were taken into account and the prioritization criteria established by the Euroclimate Program, the Adaptation Fund and the Green Climate Fund were considered.

By 2023, each pilot site will include the formulation of a baseline, a study of the dynamics of the coastline in the face of various environmental and climatic forcings; the design and evaluation of measures that will focus on minimizing erosion, sediment transport and coastal flooding; and a study of intervention alternatives for each stretch of coastline considering climate change scenarios. At the same time, different types of adaptation options should be considered, such as protection, accommodation and/or retreat, depending on what is defined in the baseline assessment and in the study of the dynamics of the coastline. The country seeks to protect the risk zones (socioeconomic system and natural system) by reducing hazard and especially exposure. The proposed alternatives are evaluated both in their individual and combined application, taking into account the country's institutional capabilities achieved through the technology transfer process and the existing legal frameworks and international commitments assumed.

As a strategy, the priorities of the departmental governments and the Ministry of the Environment were combined and academic recommendations were incorporated, as well as the priorities of international cooperation. It is important to note that, according to the results of the vulnerability analyses, the eleven sites present significant levels of climate risk. This standardized strategy for defining and designing adaptation measures was selected because it is costly, mainly because it simultaneously includes restoration and rehabilitation of coastal ecosystems and underwater gray infrastructure works. To date, there are preliminary drafts for each pilot site that incorporate adaptation measures prioritizing those that are nature-based and considering gender and generations when designing them. These drafts are consulted with local stakeholders through the municipalities, as the third level of government management, and from this stage onwards the request for funds from international donors for their implementation begins. Evidence indicates that adaptation planning at the national level is stimulating adaptation planning at the departmental level. The coastal municipalities have accompanied this ten-year process and this has facilitated

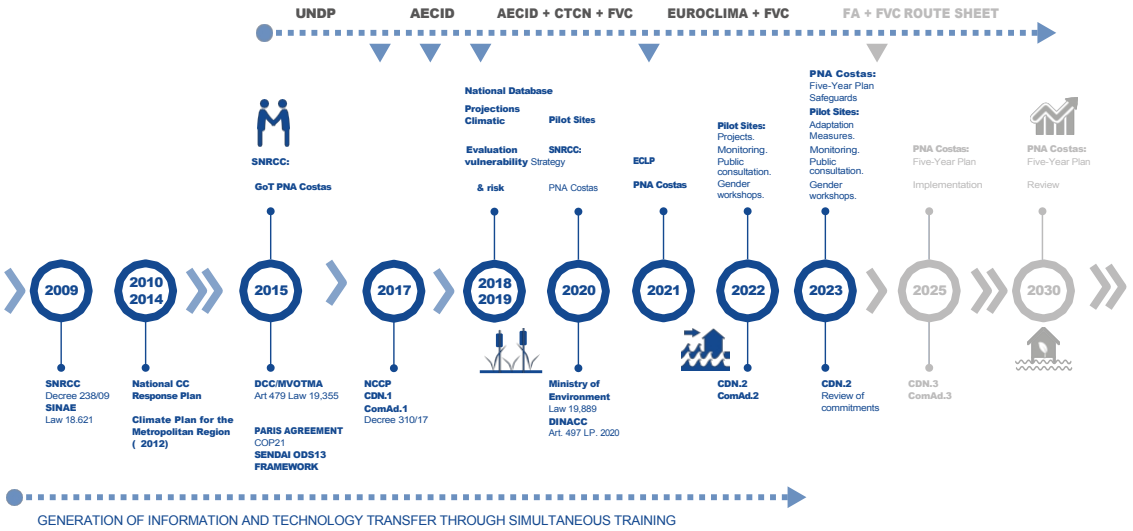
(i) coordination between administrations and integration of competencies beyond the

(**iv)** the incorporation of a long-term vision and adaptive management approach, and

(v) the provision of a general framework that can be targeted to local specificities and at different scales (from national to local). The maturity of the instruments

The number of adaptation planning instruments varies among departmental governments.

FIGURE 4. Timeline NAP Costas.



The adaptation measures to be implemented in the 11 pilot sites will be monitored through information generated by a Remote Monitoring Program (RMP, see box below), which contributes to improving knowledge of the morphodynamic behavior of the sandy beaches that make up these sites. The morphodynamics are forced by climatic agents, such as waves, wind, extreme events and river discharges. The PMR was implemented by the DI- NACC and constitutes a tool for evaluating the changes expected in the systems as a result of the agents associated with climate change scenarios, and thus incorporating this information into the planning of adaptation measures.

CoastSnapUy

Remote Beach Monitoring - *CoastSnapUy* is an adaptation in Uruguay of the global citizen science project *CoastSnap*, promoted by the National Coastal Space Adaptation Plan (PNA Costas). This citizen beach monitoring initiative generates a database of images to obtain information about the coastline. This initiative is developed by the Institute of Fluid Mechanics and Environmental Engineering of the Faculty of Engineering of the University of the Republic, the National Directorate of Climate Change of the Ministry of the Environment, with the support of the municipalities of Canelones, Maldonado, Montevideo, Colonia, San José and Rocha[1].

1 More information here.

National Energy Sector Adaptation Plan (PNA Energía)

The construction of the National Adaptation Plan for the Energy Sector (PNA Energía) began in 2019 and is still in the formulation process. The objective is to strengthen the resilience, prevention and response capacities of the energy sector to the impacts of climate change, both in the electricity and fuel sectors. The actions defined in the Energy NAP will not be at the expense of mitigation efforts, seeking to promote synergies between both types of action.

Among the strategic aspects of the plan, adaptation is established as a transversal axis of the energy sector and a continuous learning process, not a set of static measures. Thus, it proposes as long-term lines of action the reduction of the vulnerability of renewable energy resources, infrastructure and demand sectors.

Although the PNA Energía is led by the MIEM, it is built in conjunction with the sector's stakeholders, particularly the public companies, which have a high specific weight in the planning and operation of the energy system; the academia, to generate knowledge and research capabilities; the other public institutions linked to the sector, such as ADME, URSEA, OPP and other ministries; and the private sector companies.

National Health Adaptation Plan (PNA Salud)

As established as a goal for the year 2025 in the CDN1, regarding Paragraph 9 of the National Climate Change Policy, progress has been made towards the creation of the National Health Adaptation Plan (PNA Salud) with the objective of protecting the population from the negative health effects of climate change; providing timely health care; generating resilience and climate action within the National Integrated Health System, as well as in the general population.

In this sense, the 2025 goals defined in the CDN1 for this sector are oriented towards capacity building, the development of specific knowledge and the improvement of management capabilities. In the short term, the measures are oriented towards the development of a training program on climate change and health for workers in the sector and the development of an early warning system for extreme temperature events (heat and cold waves). In the medium term, the measures are oriented towards the development of a prevention plan for different threats associated with vector-borne diseases that are sensitive to climate change and variability; the study of predictive models of the behavior of local diseases and zoonoses associated with climate change; the definition of environmental health indicators linked to climate change and the health status of the population, including information related to the burden of diseases associated with climate change; and a diagnosis of the response capacity and infrastructure of health services and health care centers in the face of extreme climate-related events.

3. Mitigation

Mitigation measures, programs and projects implemented or in progress

In the First Nationally Determined Contribution (NDC1, with a 2025 horizon) Uruguay presents global targets to mitigate climate change by 2025 in terms of intensity in relation to its gross domestic product and with respect to the 1990 base year, as well as including specific targets related to Food Production (beef) and Land Use, Land Use Change and Forestry (LULUCF). A distinction is made between unconditional and conditional targets and specific additional means of implementation. In turn, climate change mitigation measures are defined in order to contribute to the achievement of the unconditional mitigation objectives established in the CRC. At the end of this section, a synthesis of the main advances of CDN1 is provided.

The Second Nationally Determined Contribution (NDC2, with a 2030 horizon), submitted in December 2022, establishes unconditional targets conditional on specific additional means of implementation. The CDN2, in terms of its contribution to GHG emissions and, as in CDN1, presents global objectives to mitigate climate change for the gases CO_2 , CH_4 and N_2 O and adds a target for hydrofluorocarbons (HFCs) that had not been considered in the CDN1 objectives. A relevant factor is that the global targets in CDN2 were defined in absolute terms, in line with the Uruguay PRCA scenarios, unlike CDN1, which presents targets in terms relative to GDP. The target set for CO_2 implies a considerable slowdown in the growth of CO emissions. From 1990 until the beginning of the implementation of the first energy transformation between 2010 and 2014, CO_2 emissions grew at an average annual rate of 2.9%, while the target set for 2030 reduces this rate to 1.3% per year. With respect to CH_4 and N_2 O, gases that come mainly from food production, the 2030 target confirms the trajectory towards emissions stability that Uruguay presented in its LCA, both with annual growth rates between 1990 and 2030 below 1%.

As in CDN1, specific targets are also presented in relation to beef production, in terms of emissions intensity per unit of product. These mitigation targets represent an advance in ambition with respect to CDN1, as they show that the country continues to develop by reducing emissions intensity.

Regarding the contribution to GHG removals, Uruguay presents specific objectives for the year 2030 of conservation and increase of carbon stocks for the different reservoirs and land use categories, representing, as a whole, a progression in ambition in relation to the CDN1.

The mitigation targets cover all INGEI emitting sectors: Energy, including Transport; IPPU; AFOLU; and Waste, and include emissions of $_{CO2}$, $_{CH4}$, N2O and HFCs.

Energy sector

In the energy sector, we highlight the consolidation of the decarbonization of the electricity matrix, achieved in recent years through the incorporation of energy capacity from wind, biomass and solar sources, which together with hydroelectric energy will reach 91% of electricity generation by 2022. These actions, together with those of energy efficiency, address the problem of mitigation and adaptation to climate change in the energy sector, within the framework of the National Energy Policy, in force since 2008 and with a horizon of 2030 and in line with the National Climate Change Policy.

Currently, the country is aiming for a second energy transition to achieve the decarbonization of key economic sectors such as transportation and industry, which continue to consume fossil fuels and are the main CO emissions$_2$, improve the efficiency of the electricity system through the incorporation of storage and demand management solutions to take advantage of the surplus[72] and the development of a hydrogen economy that not only impacts on the decarbonization of the energy system but also on the production of raw materials such as ferti- lizers. Planning for the development of green hydrogen is set out in the Green Hydrogen Roadmap, with a 2040 horizon.

Recently, Article No. 182 of the Accountability Law No. 19,996 established an increase in the minimum requirement of fuel alcohol in a proportion (of 8.5%) of the total volume of the mixture between such product and gasoline for automotive use. On the other hand, in accordance with Article No. 183 of the same Law, Article No. 7 of the Agrofuels Law, which established the obligation to mix at least 5% biodiesel in gasoil as from 2012, was repealed. Measures are being evaluated to compensate for the increase in emissions caused by eliminating this mixture.

On the other hand, Article N°349 of the Accountability Law N°19,670 of 2018 approved a subsidy for the purchase of electric buses, which would cover the initial investment gap between a diesel and an electric bus. The law established a maximum of up to 4% of the bus fleet nationwide. Within this framework, a call for proposals was made to operators and 32 units (30 in Montevideo and 2 in the rest of the country) were assigned this subsidy. This subsidy, which is granted in monthly installments for seven years, is practically equivalent to the subsidy currently obtained by public passenger transportation (through diesel consumption) over a 16-year period of use. In this way, a polluting technology is replaced by a cleaner and more efficient one, and collective transportation companies are helped to make their investments, thus equalizing the cost of their investments.

72 Presidency of the Oriental Republic of Uruguay (2021): *Voluntary National Report on the Sustainable Development Goals 2021*.

total ownership during the life of the bus[73]. This measure also improves the quality of service for people, since the subsidy required improved accessibility, comfort and service features in the new units[74]. This course of action was modified and adapted in 2022, creating the "Sustainable Mobility Trust", described below.

Carbon tax. The Accountability Law No. 19,996 of 2021, in its article No. 326, creates a tax on CO_2 emissions for gasoline. This tax is in force as from January 1, 2022. The value set at 2021 prices is $5,286, equivalent to u$s 120 per ton of CO_2. As from the year 2022, such value is updated annually according to the variation experienced by the Consumer Price Index (CPI) and the information on the corresponding CO_2 emissions provided annually by the Ministry of Industry, Energy and Mining (MIEM). The Executive Power has the power to allocate a percentage of the proceeds of this tax to finance policies that promote the reduction of greenhouse gas emissions, sustainable transportation, the adaptation of ecosystems and productive systems to climate change, and may create a special fund for this purpose, under the terms and conditions established in the regulations[75].

As mentioned earlier in this report, in the case of transportation, the decarbonization of electric power generation provides opportunities to make progress in reducing emissions through the development of electric transportation. In terms of infrastructure, Uruguay is a pioneer in the region; it currently has 165 charging points in public access places for both slow and fast charging, and the goal for 2023 is to reach 300 charging points installed in the country, one every 50 kilometers[76].

It is worth noting the cross-cutting nature of mobility, so that its transformation is the responsibility of various ministries, departmental governments, public companies that supply fuel and electricity, public and private freight and passenger transportation companies, vehicle vendors, as well as public and private users, including private vehicles. This means that the issue must be dealt with on a multi- and inter-institutional basis.

In 2014, the ***Interinstitutional Group on Energy Efficiency in Transportation,*** coordinated by the MIEM, was created with the aim of joining efforts and promoting joint policies for efficient transportation. This group is a technical forum for dialogue, exchange and coordination of efforts to generate proposals for more efficient transportation. Today, with a wide institutional representation, it is formed by: MA, MEF, MIEM, MTOP, OPP, Congress of Mayors, IM, URSEA, UNASEV, UTE and ANCAP[77]. This group seeks to articulate and implement policies towards energy efficiency and sustainability linked to transportation.

73 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United Nations Framework Convention on Climate Change.*
74 European Commission (2022): *Guide for sustainable urban mobility planning in Uruguay.*
75 SNRCC (2021): *Fourth Biennial Update Report BUR4 to the Conference of the Parties to the United Nations Framework Convention on Climate Change,* Montevideo, Uruguay.
76 More information here.
77 More information here.

Among the latest actions generated by this group are proposals to promote the use of hybrid and electric vehicles through tax reductions. The group also served as a framework for the development of the MOVÉS and NUMP Uruguay projects (described below). It has also promoted the creation and implementation of the aforementioned subsidy for the purchase of electric buses[78].

The ***MOVÉS Project "Towards an efficient and sustainable urban mobility system in Uruguay***", which started its activities in 2018 and extended until 2022, promoted a sustainable, low-carbon, efficient and inclusive mobility system, based on the improvement of institutional capacities, the development of appropriate regulation, the application of innovative technologies and the promotion of a cultural change.

Through the adaptation of the normative, regulatory and fiscal framework, as well as the promotion of a cultural change, MOVÉS sought to promote the use of public passenger transportation and active mobility (walking and cycling), as well as the replacement of passenger vehicles, cargo transportation and last mile logistics with electric and sustainable vehicles. MOVÉS promoted equal access to mobility considering environmental and social aspects, taking into account the gender perspective and people's socio-economic conditions. The Project responded to these objectives by supporting its member institutions in the generation of standards, environmental regulation, taxation, and urban planning processes, in order to favor conditions for more sustainable mobility. The Project developed studies and participated in the preparation of fiscal proposals that promote the use of more sustainable modes and vehicles, as well as technical regulations that allow their development and use throughout the country, seeking a coherent scope in the region. We also worked on the development of studies and proposals for improving the quality of public passenger transportation and integrating mobility into urban planning processes, with the aim of returning public space to the people and making cities more livable. Finally, we supported the creation of environmental regulations that, on the one hand, would be more demanding in terms of safety and environmental requirements for vehicles and, on the other hand, would regulate the complete life cycle of batteries.

MOVÉS was a project financed by the Global Environment Facility (GEF). Its implementing agency was the United Nations Development Program (UNDP) and it was executed by the Ministry of Industry, Energy and Mining (MIEM), in association with the Ministry of Environment (MA) and the Ministry of Housing and Land Management (MVOT), and the collaboration of the Uruguayan Agency for International Cooperation (AUCI).

Among the results of the project are its contribution to the incorporation of 32 electric buses supported by the State subsidy, 3,888 tons of CO_2 avoided, 5 agreements with public transport companies, 4 regulations for the promotion of the use of electric vehicles, 3,000 tons of CO2 avoided, 5 agreements with public transport companies, 4 regulations to promote the use of electric vehicles, 3,000 tons of CO

78 European Commission (2022): *Guide for sustainable urban mobility planning in Uruguay*.

electric mobility. There are also annual reports on the operation of electric buses and 4 institutional diagnoses with a gender perspective.

The ***NUMP Uruguay Project*** (Euroclima+ / GIZ) is implemented by MA, MEF, MIEM, MTOP, MVOT, and with the collaboration of the MOVÉS Project. The NUMP Uruguay project contributes to the development of a National Sustainable Urban Mobility Policy (NUMP) and aims to build capacity at the national and departmental level in sustainable urban mobility planning. The project also supports the development of technical, regulatory and financial instruments to facilitate the implementation of sustainable urban mobility measures in Uruguayan cities[79].

The project has a national scope, but is designed to facilitate and promote actions at the local level in the various cities of the country with potential for electrification of mobility, in addition to promoting actions that contribute to more sustainable mobility and mobility planning. It will therefore have local and national impacts. Among the local impacts are the reduction of emissions of pollutant gases and particulate matter and the reduction of noise emissions. At the national level, the project will contribute to the reduction of GHG emissions and, therefore, will contribute to meeting the targets of the CDN1 as well as to establishing more ambitious contributions in the successive NDCs under the Paris Agreement. It will also contribute, through the actors involved, to the change in behavioral patterns that are necessary for a culture of sustainable consumption. It will favor the country's energy autonomy by reducing the consumption of imported fossil fuels, both through the increase in active mobility and the better consideration of mobility in urban planning, and by substituting that fossil energy of external origin for renewable energy of domestic origin, the majority source of the electricity matrix. It is also considered the strong impact that awareness-raising and capacity building in departmental governments for sustainable mobility planning will have in the long term[80].

As part of this process, a Guide for Sustainable Urban Mobility Planning (2022) was prepared to provide technical staff in departmental governments with tools for planning and implementing sustainable mobility strategies in their cities and territories and to promote integrated urban development and mobility planning. The Guide is divided into four parts:

a) general concepts of mobility, **b)** mobility planning, **c)** mobility measures, d) mobility management, e) mobility planning, f) mobility management, g) mobility planning.
sustainable urban mobility to be applied in cities and **d)** design criteria for sustainable urban mobility elements.

This guide is one of the four products of the project, which aims to lay the foundations for a Sustainable Urban Mobility Policy (SUMP). The SUMP considers the social, environmental, economic and enabling dimensions of urban mobility with a long-term horizon, and with short- and medium-term strategic guidelines and measures (including issues of electric mobility, financing, planning and financing, and the use of the environment).

79 European Commission (2022): *Guide for sustainable urban mobility planning in Uruguay*.
80 More information here.

These actions are implemented in an intersectoral and inter-institutional manner by the national and sub-national public sector, as well as the private sector, academia and civil society, based on a shared vision of sustainable urban mobility. These actions are carried out within the framework of the Inter-institutional Group on Energy Efficiency in Transportation[81].

Also within the framework of the NUMP Project, the Guide on Electric Urban Mobility in Uruguay (2022, G-MUE) was prepared. The purpose of the Guidelines is to show alternatives for the promotion of electromobility, systematizing the state of the art of urban electric mobility for freight and passenger transport, together with recommendations for an adequate promotion and implementation by local governments and relevant stakeholders in Uruguay.

The ***Renewable Energy Innovation Fund (REIF)***[82] seeks to support Uruguay's second energy transition through the transition to low-carbon technologies in the industrial, transportation, commercial and residential sectors, ensuring universal access to renewable energies and stimulating innovation and competitiveness in the country. It is a financing window that combines private capital and United Nations funds to drive energy transition projects along with a technical assistance mechanism to help companies validate technologies, business models and impact measurement. The program is based on the energy transition as an engine for accelerating Uruguay's economic and social development, contributing to improving environmental sustainability and promoting social and gender impact, increasing access to energy for vulnerable groups by improving connections and the participation of women in the economy. Program participants: Ministry of Industry, Energy and Mining, Ministry of Environment, the Planning and Budget Office and UTE. Implemented by: *Joint SDG Found*, United Nations Uruguay, UNIDO, UNDP and UN Women.

The Accountability Law of the year 2022 authorizes the Executive Branch to create a "Sustainable Mobility Trust Fund" which will have as its objective the administration of resources destined to programs that make possible the collective land transportation of passengers in a sustainable manner and at accessible prices. The same law establishes that the Executive Power is empowered to allocate the resources currently destined to the "Fideicomiso de Administración del Boleto" (Ticket Administration Trust) to the Trust created in this law. The implementation of these changes and the terms, as well as the transfer of resources from the old to the new instrument will be defined once this law is regulated through the corresponding Decree.

The change introduced in the Accountability is another fundamental step in the promotion of sustainable mobility, as it allows aligning incentives towards the promotion of cleaner and more efficient technologies, making them more competitive with traditional ones. It is worth mentioning again here that, at present, the Bo- leto Trust Fund subsidizes public transport fares through fuel consumption.

81 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United Nations Framework Convention on Climate Change.*

82 More information here.

of public passenger transport operators throughout the country. A change in the way this subsidy is allocated automatically improves the prospect of technological transition to a much cleaner and sustainable one.

Other measures such as reduction of taxes and fees for electric vehicles, discounts on permits for electric cabs, as well as selective promotions in investment projects seek to encourage the acquisition of electric vehicles to replace others on the market. Among the incentive measures for electric vehicles are the reduction of the Internal Specific Tax (IMESI) applicable to hybrid and electric vehicles, the incorporation of electric utility vehicles to the cleaner production indicator of the Investment Promotion Law, and the modification of the Global Rate for cars with an exclusively electric propulsion engine, which was set at 0%.

For its part, Montevideo continues to develop sustained work in the incorporation of dimensions linked to energy efficiency and sustainable mobility. It is working on the extension of the urban bicycle lane to provide the city with a total of 55 km by 2020 and on the renovation of the public bicycle system. It is also working on the transition to the electrification of public transport and cabs. Montevideo has 54 electric cabs (2018), with the goal of reaching 10% of the city's cabs being electric by 2020 and 5% of the public transport fleet being electric vehicles. As part of a global policy to encourage electric transport, the Municipality is exempting 100% of the license tax on up to 400 vehicles.

Green hydrogen roadmap [83]***.*** The ambitious decarbonization targets set globally for the year 2050 make it necessary to promote accelerated and significant changes, both with respect to the energy sources used and the use of raw materials consumed in different industrial processes. Within this framework, green hydrogen, with the capacity to decarbonize different uses, has positioned itself as an energy vector of great relevance in the global agenda, especially for those sectors where decarbonization through renewable energies or electrical energy in a direct way is very complex.

After a process of analysis and exchange with relevant national and international actors, it was concluded that Uruguay has very good conditions for the development of green hydrogen and derivatives. In this sense, Uruguay is advancing in the promotion of its green hydrogen ecosystem through the development of its national strategy and its Green Hydrogen Roadmap, which was presented in June 2022. The hydrogen sector fund was also launched, an instrument that promotes the call for innovation and production pilot projects with up to US$10 million non-refundable and is currently advancing in the development process of the selected pilot. There are also fiscal incentives for the development of large-scale projects for the production of green hydrogen and its derivatives[84].

The H2U Program is a national initiative based on the articulation of public (Ministry of Industry, Energy and Mining and the Ministry of Economy and Finance, the state-owned fuel company Ancap and UTE) and private efforts. The Uruguayan government plans to play an articulating and supportive role in the development of green H2 in Uruguay, working together with the private sector.

In the case of geothermal energy, during the years 2020 to 2022, technical assistance was developed with the support of the Climate Technology Center and Network for the development of a national roadmap for the use of low-energy geothermal energy for thermal conditioning in the residential, industrial and commercial service sectors. As a final stage, a pilot project "*Geothermal air conditioning in a school in the Raigon aquifer*" is under development. Currently, students from the School of Engineering have an experimental installation for studying the use of the Raigón aquifer for thermal uses in operation on the grounds of this rural school. The purpose of this pilot project is to take advantage of this facility and expand it by incorporating the heat pumping (and conditioning) system to condition the school's classrooms.

83 More information here.
84 Uruguay XXI (2022): *Renewable Energies in Uruguay.*

Agribusiness

As mentioned in the previous section, the project ***"Climate-smart livestock production and soil restoration in Uruguayan pastures"*** was implemented in the agricultural sector from 2019 to 2023 with the aim of increasing the production of livestock systems on natural pastures and, at the same time, reducing GHG emissions per kilogram of meat, favoring carbon sequestration in pasturelands and restoring ecosystem services. In addition to monitoring economic-productive and social variables, the field component of the project makes it possible to estimate GHG emissions at the farm level and quantify reductions due to increased efficiency of livestock systems and to generate national information on carbon sequestration in pastures[85]. The results of three years of work in 60 livestock farms distributed in four areas of the country show that the vast majority of the farms participating in the project were able to increase productivity, improve their income and reduce greenhouse gas emissions by improving management practices in production processes and without increasing costs. Greenhouse gas emissions decreased both per hectare (7%) and per kg of meat produced (18%), and 65% of the farms reduced their emissions per hectare and 75% reduced their emissions per kg of meat produced. They went from 1,805 $kgCO_2$ -eq/year/ha to 1,679 $kgCO_2$ -eq/year/ha and from 21 $kgCO_2$ -eq/kg to 17 $kgCO_2$ -eq/kg of meat produced, mainly due to reductions in nitrous oxide (N_2 O) and methane (CH_4) emissions from livestock. The decrease in total emissions was achieved by the reduction in stocking rate and the decrease in emissions intensity was achieved by the increase in meat production per animal (higher efficiency). The impact of the project on the 28,000 ha of grazing land involved was a reduction of 3,528 tons of CO_2 -eq per year in GHG emissions.

One of the most significant results of the project was the development of a National Strategy for sustainable livestock production, which includes a ***National Plan of Appropriate Mitigation Actions*** (NAMA). The Mitigation Plan identifies a series of practices and technologies that focus on improving productivity and efficiency on livestock farms. These practices make it possible to reduce the intensity of greenhouse gas (GHG) emissions per kilogram of meat produced. There is a relative consensus at the national level on what these practices and technologies are, although different approaches have been identified that give different relative weight to process technologies and those based on external inputs.

On the one hand, there is a solid national research base showing that it is po- sible to improve productive and economic outcomes in livestock farming through the adoption of simple management practices based on optimal management of the natural field and reduced use of external inputs (Modernel et al., 2016; Paparamborda, 2017; Picasso et al., 2018; Ruggia et al., 2021; Jaurena et al., 2021). These natural field-based ecological intensification practices focus on the spatio-cio-temporal management of grazing, and have been promoted at the national level by the Ga-

85 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United N a t i o n s Framework Convention on Climate Change.*

and Climate and other initiatives. In addition to their climate change mitigation potential, they can generate co-benefits linked to improving the state of the national countryside and its ecosystem services (climate change adaptation, carbon sequestration, biodiversity conservation, water regulation, nutrient retention and soil erosion control). However, production under this intensification mode has a limit imposed by the availability of water in the soil given by rainfall and soil nutrient content, which determine the growth and nutritional value of forage (Jaurena et al., 2021).

On the other hand, there are technologies and practices that make it possible to increase the level of productivity of livestock systems through productive intensification based on external inputs. These technologies seek to overcome the aforementioned limitations in order to continue increasing livestock production, but at the cost of reducing many of the ecosystem services associated with the natural range (Jaurena et al., 2021). Through increased productivity, these practices can further reduce the GHG emissions intensity of livestock systems, compared to the ecological intensification approach. However, some of them present compromises in terms of biodiversity conservation, nutrient balance, resilience to climatic events and the sustainability of livestock systems in the medium and long term.

Secondly, technologies have been developed that have a direct effect on the absolute GHG emissions of livestock and that do not necessarily generate an increase in productivity, some of which have been more recently introduced in the country. This category includes the use of methanogenesis inhibitor additives that reduce enteric methane emissions, genetic selection based on methane emissions efficiency (which also has an impact on meat production efficiency), and the incorporation of high tannin forages to reduce nitrous oxide emissions.

Thirdly, there are measures aimed at increasing carbon sequestration, either in soils (adoption of practices to improve grazing management, avoid conversion of pastures, and inclusion of perennial pastures in agricultural rotations) or in forest biomass (shelter and shade forests, silvopastoral systems, and native forest conservation measures).

The National Strategy for Sustainable Livestock establishes objectives that the country aims to achieve in the area of livestock and is part of the SENDA plan for agricultural development. The objective is to contribute to the sustainable development of the national livestock industry, to produce quality food and fiber in a competitive and inclusive manner, with climate adaptation and mitigation of greenhouse gas emissions, while contributing to the conservation of natural ecosystems.

In order to achieve the objective, the following strategic dimensions are defined: **(i)** Research, generate and manage knowledge for sustainable livestock production; **(ii)** Develop a system of extension, dissemination and generation of incentives for sustainable livestock production; **(iii)** Strengthen commercial insertion and international negotiation, in order to achieve a better positioning of the meat sector at the international level; (iv) Strengthen the development of a system of sustainable livestock production; and (v) Improve the competitiveness of the livestock sector, with a view to achieving a better positioning at the international level.

(iv) To bring the livestock sector closer to society through a communication strategy.

The strategy is aimed at all cattle and sheep farming in the country, including all production systems. Dairy cattle production is not included in this document.

Livestock environmental footprint. In order to establish a tool that contributes substantially to the sustainable development of meat and milk production, that considers the protection of the environment and gives additional value to what is produced, based on available information and knowledge, in 2021 a technical work team was formed to study the environmental footprint of livestock production in Uruguay[86].

The team is composed of members of the National Institute of Agricultural Research (INIA), the National Milk Institute (INALE), the National Meat Institute (INAC) and members of the technical teams of the Ministries of Environment and Livestock, Agriculture and Fisheries.

The work carried out allowed for the unified development of methodologies and a set of indicators that were reflected as public goods in a document presented in 2022 for four environmental components: biodiversity, water, land and air (GHG emissions)[87].

On the other hand, in December 2021, Uruguay adhered to the Global Methane Commitment. The commitment implies for the signatory countries to jointly develop emission reduction policies with the aim of reducing methane emissions from the energy, waste and agriculture sectors by 30% globally. As a result, and within the framework of the Methane Hub Secretariat, Uruguay is working on the following initiatives:

- ***Pathways to Dairy Net Zero*** in the framework of the *Global Dairy Platform*.

  In line with the actions being promoted worldwide by the Global Methane Commit- ment, Uruguay, through MGAP, joined the Pathways to Dairy Net Zero (PDNZ) initiative, an initiative of the Global Dairy Platform (GDP), which has been in existence for several years, together with more than 100 organizations from around the world. Uruguay is currently developing a regional proposal with Colombia and Costa Rica to facilitate the transition to a low-emission, customer-resilient dairy chain that is sustainable and competitive, guaranteeing its role in nutrition and food security.

86 MGAP - OPYPA (2022): *OPYPA Yearbook,* Montevideo, Uruguay. P. 623, Huella ambiental de la ganadería en Uruguay. *Excerpt from the Report of the Interinstitutional Technical Team of the Livestock Environmental Footprint.*

87 More information here.

The Global Project seeks to accelerate innovation, research and technical change towards low greenhouse gas emission dairy farming, together with ten other countries in different continents: Africa (Tanzania, Kenya, Uganda), Asia (Vietnam, India, Pakistan) and the Americas (Costa Rica, Colombia, Uruguay). In this context, each country included is working at the national level to identify priority lines of work that will be assembled into a regional proposal. For the formulation of the national component of this Global Project, within the framework of the National Climate Change Response System, INALE, MGAP and MA convened two workshops in October 2022 and July 2023 and a working meeting to identify national priorities on climate change adaptation, risk management and mitigation of greenhouse gas emissions in the national dairy sector and to validate the regional proposal to be submitted to the Green Climate Fund.

- Promotion of ***genetic improvement*** measures in animals (selection of animals that generate less methane).

  This initiative is aligned with the provisions of CRC2, which included the following measure related to mitigation in the Agriculture Sector - Beef Production: "By 2030 a genetic improvement platform has been developed with methane emissions reduction objec- tives for cattle and sheep, without losing sight of livestock productivity, that strengthens the incorporation of genomics into current programs and includes the estimation of the potential impacts at national es- cal of genetic improvement in the mitigation of GHG emissions and its co-benefits with climate change adaptation."

- Analyze the impact of ***animal health on productivity and GHG emissions***.

  In the same way as the previously mentioned initiative, this line of work is in line with the provisions of CRC2, which included the following measure related to mitigation in the Agriculture Sector - Beef Production: "By 2030, the potential impact on a national scale of animal health problems on the reduction of methane emissions for cattle and sheep and their coverage with adaptation to climate change has been estimated".

Forestry sector

In the forestry sector, within the framework of the contributions assumed by the country in the CRCs, the protection of natural ecosystems, including the country's native forests, is considered a priority.

The DGF of the MGAP is the executing agency of forestry policy at the national level. Among its tasks are the conservation of native forests and the expansion of the country's forest base. Uruguay has a solid political and legal framework that has made it possible to meet the objectives set: the expansion of the national forest area, the development of the industrial phase, advances in research and innovation in different chains of the forestry-industrial sector, and the certification of sustainable forest management (FSC, PEFC, UNIT). With regard to native forests, according to the latest available mapping (2021), the national surface area is 847,181 ha, equivalent to a coverage of 4.84% of the total territory. Of this area, 74% is registered with the DGF and 29% has some type of management plan. In order to be conserved, it must be sustainably managed and permanently monitored. In this sense, the DGF has played and continues to play a key role in the conservation of native forests in our country[88].

Uruguay pioneered a concept similar to today's "Payments for Environmental Services" (PES). Since 1968, when the forest registry was created, tax exemptions have been granted on the areas of native forest declared by the producers, which was the first conservation measure. These exemptions include all taxes levied generically on agricultural and livestock farms, their owners or their income, and in order to use them, the native forest must be qualified and registered by the Forestry Directorate in the National Forest Registry.

The native forest in Uruguay is protected by the Forestry Law (No. 15,939/87). In particular, Article 24 of this law prohibits logging and any operation that threatens the native forest, with the exception of exceptions authorized by a technical report from the General Forestry Directorate (DGF) of the Ministry of Livestock, Agriculture and Fisheries. This regulatory framework has historically allowed the protection of its surface and, therefore, the provision of ecosystem services. Decree No. 330 of 1993 establishes that the cutting and extraction of forest products from native forests must be carried out through Management Plans that are evaluated and authorized by the DGF.

Illegal logging, as well as the unauthorized transport or possession of native forest products, leads to economic sanctions and seizures. Illegal logging is controlled by three means: field inspections, control of transport on routes, and surveillance at storage sites. Firewood sales points must be registered with the DGF and have official documents that ensure their traceability and legal origin.

Actions related to native forest have a clear adaptation- mi- tigation synergy, which is why they are so relevant at the national level. In the year 2022, the country will complete the first phase of the

88 MGAP - OPYPA (2022): *OPYPA Yearbook.* P. 457 "Contribuciones y desafíos para fomentar el desarrollo sostenible y conservación de los bosques a nivel nacional", Boscana, M.; Escudero, P.; Garrido, J.; Martinez, G.

The first stage of the ***Reducing Emissions from Deforestation and Forest*** Degradation[89] (REDD+) project, which was supported by the World Bank's Forest Carbon Partnership Facility (FCPF), sought to generate inputs to improve the quality of the country's native forest ecosystems and their ecosystem services, in addition to avoiding greenhouse gas (GHG) emissions. This initiative sought to generate inputs to improve the quality of the country's native forest ecosystems and their ecosystem services, in addition to avoiding greenhouse gas (GHG) emissions from deforestation and degradation processes and promoting conservation actions and increased carbon sequestration. At the same time, it sought to improve and enhance current knowledge about the native forest through different lines of research that were developed within the framework of a working agreement with INIA and other institutions[90] to address aspects of ecology, carbon dynamics, forest interactions with other production systems, ecosystem services with emphasis on the protection of water quality and invasion by exotic species. These developments were fundamental not only to meet REDD+ reporting requirements but also to monitor the progress of Uruguay's CDN1 and CDN2.

As a result of the project, future lines of action were defined and the current challenge is to obtain additional funds for its implementation. In December 2022, the FCPF Participants Committee endorsed, by Resolution PC/Electronic/2022/3, Uruguay's REDD+ Readiness Preparation Package[91] , which will help in the search for funding for the next stages of the REDD+ process.

Likewise, the social and commercial actors linked to forest sustainability are diverse, so MGAP has launched "SENDA NATIVA", a communication campaign that seeks to have an impact on each of them: producers, transporters, barkeepers and the general public.

Another ongoing project, carried out jointly with the European Union, seeks to generate a certification chain associated with exportable products, guaranteeing that the production unit is free of deforestation and is managed sustainably. This will make it possible to transfer part of the product prices to forest management, which will have a direct impact on improving conservation status. Linked to forest monitoring, between 2021 and 2022, the DGF implemented the "Strengthening of management capacities for the protection of native forests" project, within the framework of the Black River Initiative. This project generated high quality information in the study area with qualitative and quantitative information on the status of the forests, as well as being a pilot area for reviewing methodologies for future national forest inventories. The results obtained are additional inputs for policy development and strategic planning of this resource[92].

Likewise, through the project "***Institutional and technical capacity building to increase transparency within the framework of the Paris Agreement***", the following is being formed in the

89 Project implemented jointly by MGAP and MA with the support of the World Bank's Forest Carbon Partnership Facility (FCPF).

90 This agreement involved researchers from INIA, UDELAR (CURE, Faculty of Agronomy), the Instituto Plan Agropecuario and the University of Buenos Aires (UBA).

91 More information here.

92 More information here.

In the year 2021 a consulting team selected together with technical teams from the DGF, the National Climate Change Division of the MA and the United Nations Development Program (UNDP) for the "Definition, characterization and quantification of the area under silvopastoral systems, for the follow-up of the contributions established in Uruguay's Nationally Determined Contribution". Silvopastoral Systems (SSP) in our country have emerged as an integrated production alternative between forests and livestock, involving the management of native forests, open and shade forests for livestock, as well as forest plantations with designs that seek to optimize the growth of the three essential components of the system (grass, tree and livestock). Relevant results have been achieved to advance in the design of policies to promote the development of these systems at the national level.

Waste

In relation to the waste sector, strategies are being developed to improve its management and recovery. As mentioned above, in 2019, the Integrated Waste Management Law was approved as a regulatory instrument that defines and regulates waste management at the national and departmental levels, with a focus on environmental, economic and social sustainability.

The National Waste Management Plan (2021) is structured into the following global results: Generation; Collection, transport and final disposal; Valorization; Social inclusion and formalization; Labor; Economic sustainability; Technological incorporation, research and innovation; Institutional strengthening; Participation and education; and Information and communication, which seek to set the main directions of the plan and have associated goals with a five and ten-year horizon.

A set of objectives is identified for the achievement of each of these results. In turn, there are 5 dimensions or axes that are transversal to different objectives of the PNGR: Environmental protection and sustainability of management; Generation of value and employment; Mobilization and innovation; Education and commitment of all actors in society; and Gender and generations.

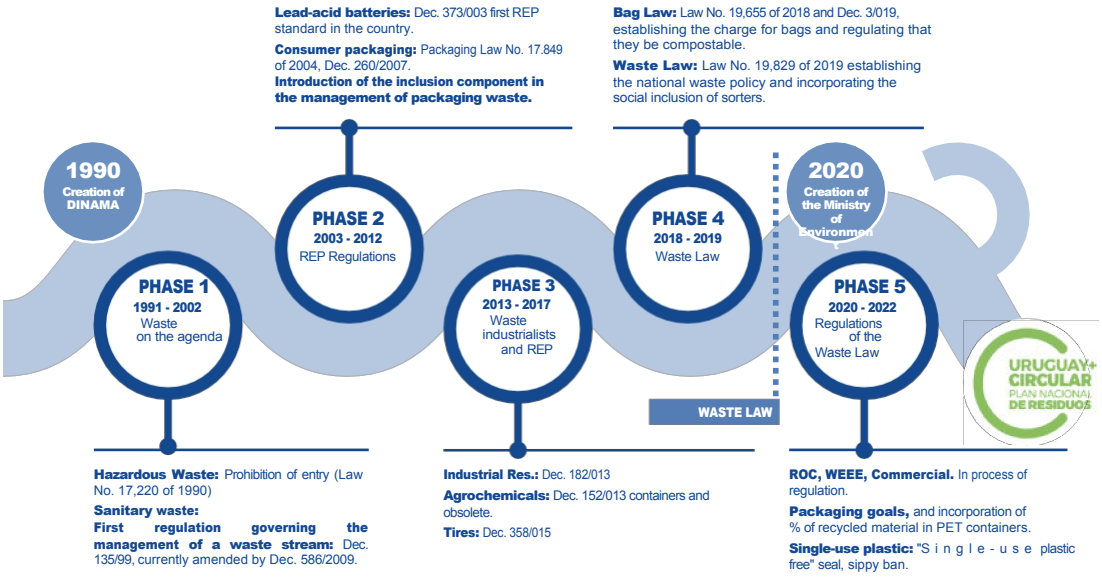
The central aspects of the PNGR are: reducing waste generation, reducing waste flows destined for landfill while determining the closure of landfills and the installation of sanitary landfills, increasing waste recovery and valorization, facilitating selective collection, promoting the collection and transportation of waste with lower GHG emissions[93].

93 SNRCC (2021): *Fourth Biennial BUR4 Update Report to the Conference of the Parties to the United Nations Framework Convention on Climate Change.*

As of the year 2021, and within the framework of the process of strengthening the regulations related to waste, the regulations that will regulate the following flows within the framework of the Waste Law[94] are currently being drafted:

- Waste electrical and electronic equipment (WEEE), a special waste stream. The objective of the regulation will be to establish a differentiated WEEE management system, applying the principle of extended producer responsibility and promoting the reduction of waste through strategies aimed at increasing the useful life of electrical and electronic equipment.
- Construction site waste (CWW), generated in construction, renovation or demolition activities. This regulation will be aimed at implementing a differentiated waste system that promotes the circular economy in construction.
- Waste from economic-productive activities that are not yet regulated (commerce and services) as well as waste from assimilated activities (public offices, educational, cultural, social and other institutions). It is expected that these standards will begin to be implemented in 2022.

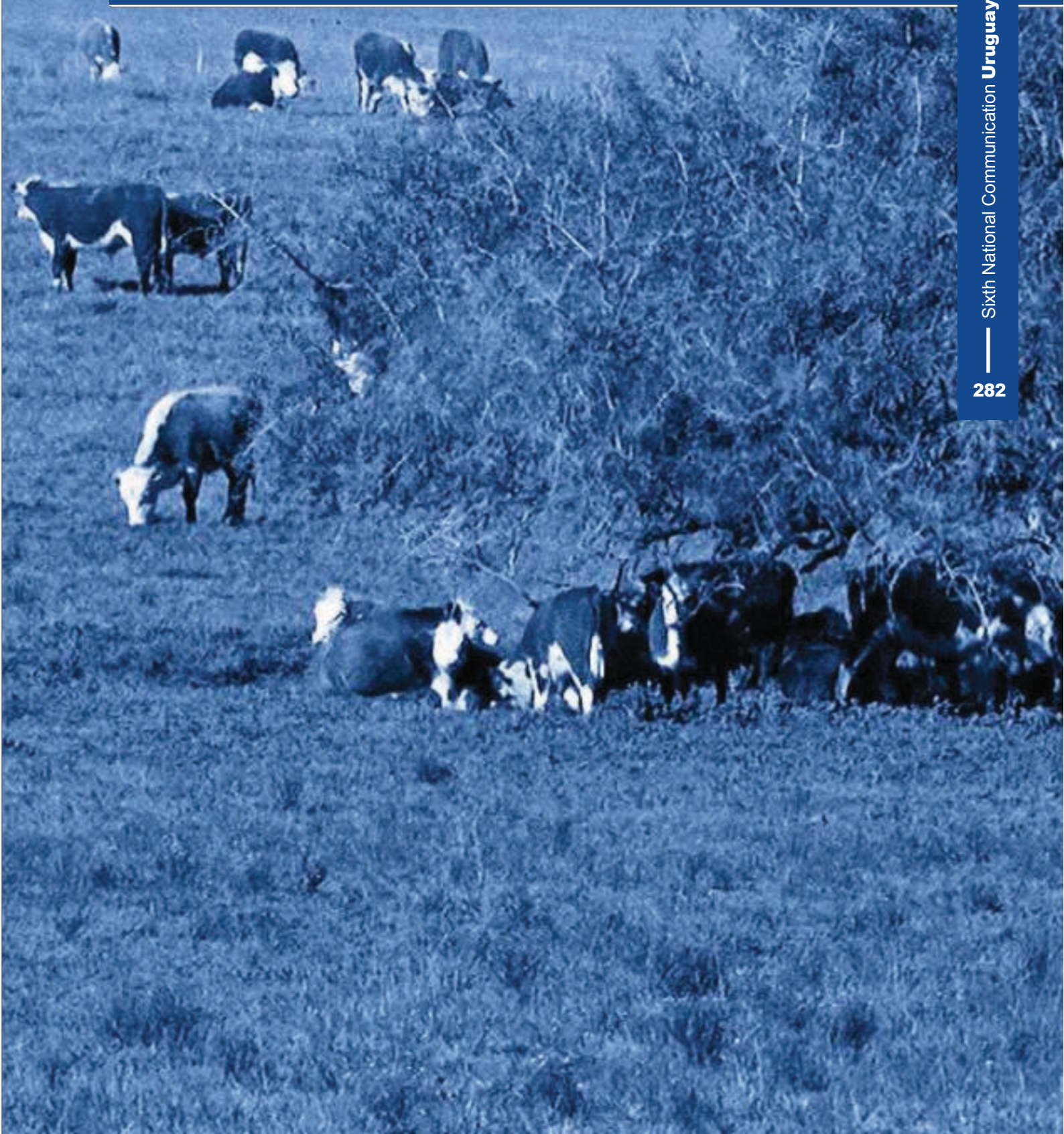
FIGURE 5. Evolution of national waste regulations (1990-2021).



94 MA (2021): *National Waste Management Plan 2022-2023.*

CHAPTER 5

Obstacles, gaps and related funding, technology and capacity needs



Obstacles, gaps and related financing, technology and capacity needs

Uruguay must continue to implement an important set of actions to adapt to climate change, which generates impacts on its territory, its economy and its population. The country is also carrying out voluntary mitigation actions in key sectors that will allow it to continue moving towards a low-carbon economy.

In order to implement the set of additional adaptation and mitigation actions identified, as well as for the sustainability of the existing ones, the country requires means of implementation to be provided by external sources, as well as specific capacities for their implementation.

Through a participatory process and analysis of key documents, a series of funding, technology and capacity gaps, needs and barriers have been identified.

In the case of adaptation, the sources of information considered were: ComAd2 (which considers the main barriers and challenges based on the analysis of Uruguay's main adaptation instruments), the NAPAs (Coasts, Cities and Agriculture) and the ECLP. In addition, the information presented in the 5th National Communication, which considers a selection of CDN1 measures, was reviewed and updated.

In the case of mitigation, the information presented in BUR 4, regarding CDN1 measures (conditional on additional and specific means of implementation) and the National Waste Management Plan (PNGR), was reviewed and updated.

The information detailed above was presented and validated during a meeting of the SNRCC coordination group. It is important to mention that the information (in spreadsheet format) was sent prior to the meeting so that the referents had the necessary time to analyze its contents.

Sections 1 and 2 below list gaps, needs and barriers to financing, technology and capacity in adaptation and mitigation, respectively.

On the other hand, section 3 refers to the consultancy "Accelerating the implementation of Research, Development and Innovation (R&D&I) measures of Uruguay's CRC" (I. Bortagaray, 2022). This work identifies knowledge gaps on issues related to climate change.

Finally, section 4 highlights the results of the "Virtual survey on gender capacity-building needs" (consultation period from July 5 to 28) conducted within the framework of the National Gender Council.

1. Description and analysis of barriers, gaps and related needs for financing, technology and adaptive capacity[1]

TABLE 1.

ADAPTATION - Source: ComAd2 + PNAs + ECLP		
AREA		**GAP / NEED / OBSTACLE**
Technology / Knowledge / Information	Transversal	More climatic information is needed (lack of data recording, scarcity of complete national studies).
		Lack of studies associated with climate action and inaction (linked to the cost-benefit of implementing adaptation actions and avoided costs; recording of impacts related to events derived from climate change and variability to improve the assessment of losses and damages).
		Integrated and interdisciplinary studies are needed to understand the complex interactions between natural and socioeconomic systems.
		Lack of sex-disaggregated, updated and available data.
		Shortage of employment data disaggregated by: areas and sectors relevant to the sector. bioclimate; public and private; roles within organizations.
		Specific studies and programs aimed at labor reconversion (green/blue jobs) are required.
		Lack of adequate dissemination of information on the subject.
	Coastal Zones	Lack of quality data or lack of access to data.
		Improve access to existing methodologies and tools to assess climate change risks and to implement adaptation measures or establish metrics and procedures to evaluate adaptation processes.
	Cities and infrastructure	Improve the development and application of guidelines for planning or implementing HACCP measures.
	Agropecuario	Gaps in information for reporting NAP Agro indicators.
		Barriers to the adoption and transfer of technologies for production systems adapted to climate variability and change.
	Energy	There are gaps in information and knowledge for carrying out projection studies of climate variables relevant to the energy sector.
		Lack of adequate instrumentation and measurement networks to observe and predict extreme events.
		There is a need to improve the recording of damages and losses in the country.
	Private sector involvement	Improve the identification of climate change risks, as well as climate change mitigation measures. answer for Uruguay.
		Improving research, the provision of knowledge, technology and information guidance to this sector becomes a key challenge in facilitating the incorporation of adaptation into companies' business models.
	Ecosystem-based Adaptation	It is necessary to increase efforts to link ecosystem functions and services at the territorial level to the reduction of specific vulnerabilities (build cases and good practices that include cost-benefit or cost-effectiveness analyses, and make EbA explicit when they are used).
		It is necessary to generate knowledge of EbA applied to the territory and make it visible as an effective alternative, with a focus on environmental integrity.

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1 Note: this table uses the term "gap" as a synonym for "gap", in accordance with the terminology used in the convention's guidelines for the preparation of national communications from non-Annex I parties.

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	AREA	GAP / NEED / OBSTACLE
Capabilities / Governance / Planning	Transversal	There are limitations or barriers that hinder the planning and implementation of the options of and reduce the range of options and opportunities available.
		Administrative changes lead to changes in priorities in the agendas and disjuncture of plans, programs and projects.
		Capacity building is needed at all levels of public administration.
		Improve institutional prioritization of the issue by designating more representatives and improving their participation.
		Improve coordination among the various members of the governance networks (government, market, non-governmental organizations).
	Coastal Zones	Insufficient coordination between the national and local levels.
		Scarce qualified human resources.
	Cities and infrastructure	Improve monitoring and implementation of adaptation actions (NAP Cities).
		Continuity of partnerships and resource allocation is required throughout changes in administrations and political authorities.
	Agropecuario	Strengthen institutional capacities and deepen institutional coordination.
	Health	It is necessary to mainstream health into the climate agenda.
	Ecosystem-based Adaptation	It is necessary to strengthen with this approach the technical capacities at the national and subnational levels, as well as those of the private sector, such as infrastructure and construction services companies.

	AREA	GAP / NEED / OBSTACLE
Financing	Transversal	Facilitate access to sources of financing for adaptation.
	Private sector involvement	Incentives or subsidies for the adoption of adaptation measures need to be identified and developed.

TABLE 2.

ADAPTATION	
Climatic Services	
CDN 1 MEASUREMENTS	**GAP / NEED / OBSTACLE**
1. By 2025, there is an integrated system for the design and management of climate services oriented to public and/or private sector decision making for relevant sectors.	**EMPTY:** There is a lack of consensus to understand the background of the measure, as there are different interpretations of what Climate Services refers to. **NEED:** Human and financial resources for formulation, The implementation and sustainability over time of a project based on the SSCC framework. The respective technology and trained human resources for management and maintenance. **OBSTACLE:** Appropriation and institutionalization of the plan measure. ted. Problems related to the acquisition of technology that will serve as a counterpart for the development of the project.
2. By 2025, there will be a radar network in the territory -which will complement the existing regional one-, a radiosonde station and a national teleplu- viometric network that will help monitor flash floods, among others.	**VACUUM:** Involvement of the institutional technical parties in the definition of technological needs and the procedures for their acquisition. Elaboration of a plan or road map that determine the terms and forms for the acquisition of the referred technology. **NEED:** Financing for the acquisition of all the equipment needed for the The required training and human resources trained for their installation, use and maintenance (specifically in the case of radars). **OBSTACLE:** Lack of budget and changing needs institutional. In the case of the radar network, administrative problems in the bidding and purchase processes, linked to some problems in the governance and administration of the radar.
Social	
CDN 1 MEASUREMENTS	**GAP / NEED / OBSTACLE**
1. By 2025, geo-referenced information on social vulnerability associated with adverse climate events is available and incorporating a human rights and gender approach that takes into account children, the population living below the poverty line and/or indigence, street people, the elderly, people with disabilities, the afro-descendant population, migrants, and the rural population.	**EMPTY:** There is no quality historical information on adverse climatic events and their respective impacts. There is no information on social vulnerability with the disaggregation proposed in the statement. **NEED:** The established needs must be reinterpreted. The appropriate territorial representation in the information systems used for risk analysis must be determined in the target. The corresponding institutional appropriation is necessary to carry out the measure. **OBSTACLE:** Insufficient inter-agency coordination and availability of resources. The information can be used, since there are data that, by their nature, are sensitive and are not public.
Health	
CDN 1 MEASUREMENTS	**GAP / NEED / OBSTACLE**
1. By 2025, a National Health Adaptation Plan has been formulated, approved, and implementation has begun.	**GAPS:** There is insufficient information generated on the impacts of climate change on health. In turn, there is insufficient information on the state of health services infrastructure and response capacities. **NEEDS: There** is a need for trained human resources. and climate change-related aspects. Technical capabilities and technologies are also required for the development of predictive models of the behavior of vector-borne diseases and zoonoses associated with climate change. At the same time, human resources are required to generate prevention strategies for vector-borne diseases that are sensitive to climate change. Capacity building is also required for the development of health and climate change registries and indicators. At the same time, resources are required to strengthen the response capacities and infrastructure of the health services. Financial resources are needed to develop a National Plan Adaptation in Health, which will make it possible to deepen the impacts to the sector and the definition of measures. **OBSTACLE:** lack of prioritization in the institutional agenda.

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Disaster risk reduction	
CDN 1 MEASUREMENTS	**GAP / NEED / OBSTACLE**
1. By 2025, at least eight flood-prone cities have a flood early warning system.	**GAP:** The establishment of the committed compliance times, in relation to the actual capacities, seems to be inconsistent. **NEED:** Reinforcement of human, technical, financial and technological capacities for the development, calibration, monitoring, evaluation, follow-up and training of each of the elements for the development of each of the elements for the development of each TSS. **OBSTACLE:** lack of resources?
2. By 2025 at least 30 flood-prone cities have flood risk maps for drainage, bank and/or sea level rise and storm surge.	**VACUUM:** The establishment of promised compliance times, around actual capacities, seems to be inconsistent. In addition, the maps are drawn up as part of the The pace of the preparation, revision and/or updating of land-use planning instruments depends in part on the frequency with which these TOIs are prepared. **NEED:** Human, technical and financial capacity building. and technology. Review the procedure for the elaboration of flood risk maps, regarding the criteria that link them to the IOTs. **OBSTACLE:** Flood mapping without being in an IOT, is not a binding instrument.
3. By 2025 all Uruguayan Departments have departmental risk management instruments that consider climate change and variability.	**GAP:** The development of RWM instruments at national, departmental and municipal levels is incipient. There is a lack of consensus in determining the range of valid instruments to be considered for counting this measure. **NEED:** Lack of capacity for planning, formulation and implementation cation, implementation and monitoring of instruments for IRM, linked or not to Climate Change. Lack of ownership in the territory for involvement in risk planning activities and adaptation to climate change at the local level. **OBSTACLE:** Lack of understanding and definitions linked to the thematic.

Cities, Infrastructures and Land Use Planning	
CDN 1 MEASUREMENTS	**GAP / NEED / OBSTACLE**
1. By 2025, at least seven departments have regional, departmental or municipal plans for local adaptation to climate change and variability.	**GAP:** Ambiguity in the definition of the measure itself. **NEED:** Establishment of a work plan, agreed with the departmental referents for the elaboration of these plans. local adaptation. Strengthening local institutional capacities, improving communication channels from the national to the local level. **OBSTACLE:** Commitment and lack of human and financial resources. at the departmental and municipal levels.

Coastal Zone	
CDN 1 MEASUREMENTS	**GAP / NEED / OBSTACLE**
1. By 2025, 20% of the coastal strip of the Uruguay River, the Rio de la Plata and the Atlantic Ocean will have adaptive management, with priority given to the most vulnerable stretches.	**GAP: Lack of** short- and long-term data series to monitor shoreline and bathymetry. **NEED**: On the one hand, human resources are required for the implementation of adaptation measures at the local level. On the other hand, economic resources are required to strengthen capacities in equipment and human resources for the implementation of coastal monitoring systems. **OBSTACLE**: Difficulties in coordination and exchange of information data between national government; departmental-national and departmental-departmental governments. Institutional weakness of the areas with competence in the coastal zone.
2. By 2020 there is a system for monitoring and evaluating adaptation measures developed in the six coastal departments in coordination with institutions with influence in the coastal zone.	

Energy	
CDN 1 MEASUREMENTS	**GAP / NEED / OBSTACLE**
1. By 2025, a National Energy Adaptation Plan has been formulated, approved and implementation has begun.	**GAP:** information and knowledge gaps for carrying out projection studies of climate variables relevant to the energy sector. **NEED: To** have trained human resources. In addition requires adequate instrumentation and measurement networks. **OBSTACLE:** Difficulties in the understanding of the subject by all the actors in the sector.

2. Description and analysis of barriers, gaps and related needs for financing, technology and mitigation capacity2

TABLE 3.

MITIGATION
AFOLU
MEASUREMENT CDN 1 / AFOLU
Expansion of the incorporation of best practices in natural field management and herd management. (CDN), including adjustment of forage supply, regenerative management, avoiding the loss of soil organic carbon.
Financial resources
EMPTY: lack of financial resources, approximately 400 USD/ha. **NEED**: financial resources to achieve the incorporation of best natural field management practices. in beef cattle production on 3,000,000 ha. **OBSTACLE:** difficulties in accessing bank credit because there is currently a lack of evidence on the productive results that can be obtained by adopting these practices.
Capacity building and technical assistance
VACUUM: the need to generate scientific evidence, accessible communication products and co-novation processes that favor technical change. **NEED: to** strengthen the dissemination of technical-scientific information on the incorporation of good natural field management practices. To provide technical assistance to producers in the implementation of these practices. **OBSTACLE:** information often exists, but does not reach producers in an appropriate way.
Technology transfer
EMPTY: need for generation of scientific evidence, accessible communication products, and processes of co-innovation to promote technical change in livestock farming **NEED:** dissemination of forage allocation technology and its advantages. **OBSTACLE: Lack** of awareness among livestock producers of the economic, environmental and social benefits of adopting improved forage management systems and good management practices. of breeding herds. The need to strengthen the capacities of livestock producers to make technical and productive transitions.
MEASUREMENT CDN 1 / AFOLU
Introduction of slow-release fertilizers and/or incorporation of adjustments in the timing of fertilizer application (CDN).
Financial resources
EMPTY: lack of financial resources. **NEED:** financial resources for the introduction of slow-release fertilizers and/or incorporation of adjustments in the timing of fertilizer application in at least 20% of the area of winter agricultural crops. **OBSTACLE:** slow release fertilizers are more expensive than traditional fertilizers.
Capacity building and technical assistance
GAP: lack of technical-scientific information on the benefits of their use. **NEED: to** promote the use of these fertilizers and/or the adjustment of application methods. **OBSTACLE:** high cost for producers.
Technology transfer
VACUUM: lack of knowledge on the part of traditional livestock farmers about the existence of these fertilizers and their application. **NEED:** dissemination of fertilizer types and their application. **OBSTACLE:** little dissemination in this regard.

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MEASUREMENT CDN 1 / AFOLU
Introduction of intermittent irrigation technology with alternating wetting and drying of soils in rice cultivation (CDN).
Financial resources
EMPTY: lack of financial resources for necessary investments. **NEED:** financial resources for the introduction of intermittent irrigation technology with alternate wetting and drying of soils in at least 40% of the rice-growing area. **OBSTACLE:** difficulties in accessing credit. The irrigation water payment system acts as a disincentive. for an irrigation system that results in water savings.
Capacity building and technical assistance
EMPTY: lack of technical-scientific information. **NEED: to** promote the use of intermittent irrigation technology with alternating wetting and drying of soils in rice cultivation. Assist technically in the implementation of this technology. **OBSTACLE:** The use of intermittent irrigation requires changes in the way production farms are systematized and in crop management to reduce the risk of yield losses.
Technology transfer
VACUUM: research is necessary to reduce the risk of yield loss. **NEED:** dissemination of intermittent irrigation technology and its advantages. **OBSTACLE:** Investments and changes in the way of production are required. There are no incentives for adoption to compensate for the risks of yield loss.

ENERGY

MEASUREMENT CDN 1 / ENERGY
Introduction of electric storage technology, including battery storage and/or pumped storage systems. (CDN)
Financial resources
EMPTY: lack of financial resources to promote the installation of these systems. **NEED:** financial resources for the incorporation of accumulation systems. Through the studies The incorporation of storage and demand management systems would postpone the need to incorporate new backup power plants that could resort to fossil resources. **OBSTACLE:** the cost of some storage systems does not yet allow their incorporation to be considered. Notwithstanding the above, the trend observed in the evolution of costs (e.g. batteries) makes it possible to foresee the penetration of these technologies, mainly from the demand side.
Capacity building and technical assistance
GAP: absence of specific training in the subject (at undergraduate and graduate level). **NEED:** although there are national capacities that can contribute to this issue, the need for the following is identified to deepen and expand training in this area. **OBSTACLE:** not identified.
Technology transfer
VACUUM: knowledge obtainable from the execution of the pilot under local operating conditions. **NEED:** development of a first pilot in one of the accumulation technologies that show the most promising results in the short term. **OBSTACLE:** No barriers to technology transfer are identified in the pilot phase.

MEASUREMENT CDN 1 / ENERGY
Deepening the incorporation of solar collectors for domestic hot water in large users, industry and residential (CDN).
Financial resources
VACUUM: although financial resources have been directed to these purposes in the past, it is necessary to mobilize resources to deepen the level of participation of this technology. **NEED:** financial resources for the development of a promotional mechanism aimed at the incorporation of technology in the sectors described above (large users, industry and residential). **OBSTACLE:** weight of the initial investment.
Capacity building and technical assistance
VACUUM: lack of knowledge in some sectors of the population and in some of the professions directly involved involved in relation to the benefits of solar thermal technology. **NEED:** although there is local capacity to address the issue, it would be convenient to have a greater number of professionals in the area and to advance with the specialization of professionals authorized to carry out some regulated activities (technical installation managers). **OBSTACLE:** not identified.
Technology transfer
no needs, gaps or barriers were identified.

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MEASUREMENT CDN 1 / ENERGY
Implementation of an energy efficiency labeling program in tertiary buildings in use phase (CDN).
Financial resources
EMPTY: financial resources for the development of incentives to promote the incorporation of buildings into the program. **NEED:** development of incentives to promote the incorporation of buildings into the program. **OBSTACLE:** resources to identify and adjust incentives to make them attractive to managers real estate agents, companies, homeowners, etc.
Capacity building and technical assistance
VACUUM: identification and approach to successful experiences and lessons learned on the subject. **NEED:** advice on program design and implementation. Training of energy service companies (ESCOs) to conduct comprehensive energy diagnostics. **OBSTACLE:** resources for training.
Technology transfer
EMPTY: knowledge in applicable methodologies. **NEED:** application of methodologies to specific cases as pilot studies. **OBSTACLE:** not identified.

TRANSPORT
MEASURE CDN 1 / TRANSPORT
Expanded introduction of electric vehicles in public transportation (CDN)
Financial resources
VACUUM: lack of financial resources, depending on the number of buses to be introduced (the cost of one unit is currently around USD 350,000 in Uruguay). **NEED:** support in the form of guarantees or soft loans to operators in the interior of the country, in order to increase the coverage of electric buses in the national territory. On the other hand, to scale up the number of electric buses in the country. The electric companies that can receive the State subsidy provided by law (4% of the fleet) will require more financial resources. **OBSTACLE:** financial situation of operating companies / relative scarcity of State resources.
Capacity building and technical assistance
GAP: lack of knowledge about the advantages of electric buses and their operation. Lack of skills for the maintenance of electric buses, particularly on electronic systems. **NEED:** capacity building for public transport operators in the technology and operation of electric vehicles. Training needs at the technician level for maintenance of electric vehicles. electric vehicles. **OBSTACLE**: cultural and technical.
Technology transfer
EMPTY: In the case of cabs, most of them load on public roads, but depending on the expansion and quantity, loading points should be reinforced. **NEED:** expansion of private freight systems by increasing the number of buses and cabs. **OBSTACLE:** cultural, technical, financial. Costs associated with electrical installations and increase of installed power with respect to the initial power of the companies. Operation with multi-hour tariffs requiring management of the load systems.
MEASURE CDN 1 / TRANSPORT
Establishment of a vehicle testing laboratory for energy efficiency and gaseous emissions (CDN).
Financial resources
EMPTY: lack of financial resources as initial investment (approx. USD 8,000,000) and annual operating and maintenance costs are estimated at approximately (USD 600,000). **NEED:** financial resources for the installation of an energy efficiency vehicle testing laboratory. and gaseous emissions. **OBSTACLE:** high cost of investment, implementation and supervision.
Capacity building and technical assistance
EMPTY: lack of a culture of efficient energy use. Lack of regulation of efficiency labeling. vehicle energy. **NEED:** technical assistance for greater dissemination and awareness of energy efficiency. Technical assistance for vehicle energy efficiency regulations. Technical assistance for laboratory operation. **OBSTACLE:** Lack of reliable information on the energy efficiency of private vehicles that are used in the production of vehicles. commercialized in the country.
Technology transfer
EMPTY: the installation of the vehicle testing laboratory is not defined as a priority. **REQUIREMENT:** technologies required for laboratory operation: chassis dynamometer system, gas analyzer bank (CO, CO_2 , O_2 , N_2 O, NOx, THC, NH_3 , NO), bag sampling unit, constant volume sampler (CVS), particulate matter unit, particle counting system, calibration gas supply system, system for measuring electrical currents in batteries (REESS). **OBSTACLE:** lack of budget allocated for the development or acquisition of these technologies.

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MEASURE CDN 1 / TRANSPORT
Expansion of the introduction of electric utility vehicles (CDN).
Financial resources
GAP: difference between acquisition and other costs (e.g. insurance) between electric and traditional vehicles. **NEED:** financial resources to improve the conditions for technology penetration: e.g. focused on reducing the cost of insurance, even though there is a recent benefit, to make them more competitive than traditional technologies. **OBSTACLE:** higher relative cost of electric vehicles.
Capacity building and technical assistance
GAP: lack of knowledge among users and insufficient conviction on the part of importers. **NEED: to** increase technical knowledge among stakeholders (e.g. importers/concessionaires) for greater penetration of the technology. Also in potential users, through campaigns/coaches to companies, etc. **OBSTACLE:** lack of information, cultural.
Technology transfer
EMPTY: lack of supply of electric vehicles, **NEED:** little diverse supply of electric vehicles. Uruguay has few national manufacturing companies, currently focused on exports, and in addition, as Uruguay is a small country, it does not receive a wide range of electric vehicles. electric vehicle brands. **OBSTACLE:** lack of interest on the part of importing companies. Cultural.

IPPU
MEASUREMENT CDN 1 / IPPU
Substitution of fossil fuels for alternative fuels with lower GHG emissions in the production of cement (CDN).
Financial resources
VACUUM: lack of funding for the transportation of available alternative fuels, and of the necessary facility modifications. **NEED:** financial resources to carry out this replacement, which may require investments in the facilities. depending on the type and proportion of alternative fuel, as well as higher operating costs, including transportation. **OBSTACLE:** high cost of transporting alternative fuels to the cement production plant, as well as the high cost of transporting alternative fuels to the cement production plant. such as changes in installations (e.g. furnace feed).
Capacity building and technical assistance
VACUUM: lack of knowledge and trained personnel. **NEED:** training and technical assistance regarding substances that can be used as alternative fuels and for their management, use and emission control. **OBSTACLE:** financial and human resources for the introduction of alternative fuels.
Technology transfer
VACUUM: adaptation of technology to be able to introduce alternative fuels in compliance with current legislation. **NEED:** analysis of available technology for the introduction of these alternatives. **OBSTACLE:** the necessary information is not available (in some cases it is under development) for decision making regarding the incorporation of alternative fuels based on available technology.
MEASUREMENT CDN 1 / IPPU
Development of pozzolanic or composite cements for the partial replacement of clinker in stages. end of the cement production process (CDN)
Financial resources
EMPTY: lack of pozzolana availability in the country. **NEED:** financial resources to access or develop the product. **OBSTACLE:** high cost of the product."
Capacity building and technical assistance
GAP: lack of knowledge regarding the use of these alternative compounds. **NEED:** technical assistance to replace clinker with other compounds while maintaining the characteristics of the clinker. desired resistance in the final product. Dissemination of the product and its use. **OBSTACLE:** the incorporation of these alternative compounds may change the characteristics of the product. final. Lack of knowledge on the part of the users of this type of product".
Technology transfer
EMPTY: lack of knowledge about the use of these products. **NEED: to** increase research and dissemination on the characteristics and use of this type of products. **OBSTACLE**: lack of dissemination regarding the use of this type of products. Lack of funding for research and development.

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WASTE
MEASUREMENT CDN 1 / WASTE
Extension of $_{CH4}$ capture and combustion systems and/or the introduction of CH4 generation reduction technologies. $_{CH4}$ to new disposal sites (CDN)
Financial resources
EMPTY: lack of funds for implementation or adaptation, including associated investments, and funds for operation and maintenance. **NEED:** financial resources both for the creation of new final disposal sites with capture system and for the introduction of capture technologies at existing landfills. **OBSTACLE:** Little analysis of other forms of business that make the projects viable. Lack of budget allocated for the design, implementation and operation phases".
Capacity building and technical assistance
GAP: lack of technical assistance for analysis both at the macro level and in the implementation survey phase. **NEED:** define cost-efficient options that rationalize transportation and infrastructure and the location of final disposal sites with capture technology, taking into account possible forms of financing, sources of funds and changes in business models. **OBSTACLE:** lack of human resources dedicated to this study."
Technology transfer
VACUUM: depending on the case, the installation of the systems may imply a site layout and its adequacy prior to the installation of the systems. **NEED:** incorporate appropriate capture technologies at existing sites that meet necessary requirements. Incorporate capture or burning technologies (depending on the scale) in the design of new disposal and other infrastructure associated with waste management with the potential to emit $_{CH4}$. **OBSTACLE:** Lack of allocation of material and/or economic resources for the adequacy and installation of the systems.
MEASUREMENT CDN 1 / WASTE
Improvement in industrial wastewater treatment systems, with technologies that reduce $_{CH4}$ emissions. This development includes the implementation of new systems for capturing and burning $_{CH4}$ in anaerobic treatment (CDN).
Financial resources
VACUUM: lack of funds and incentives to invest in these technologies. **NEED:** financial resources for the adequacy of existing systems and the creation of new systems of treatment with biogas capture. **OBSTACLE:** Lack of access to credit lines for industries to implement these technologies. In many cases, profitability may be marginal, which is not attractive for industries if there are no incentives, support instruments or legislation to leverage investment.
Capacity building and technical assistance
"VACUUM: lack of knowledge and dissemination of biogas capture and use systems that are profitable (with low payback time) and attractive to industries. Lack of trained personnel on the subject. **NEED:** technical assistance to make the incorporation of capture systems in industry profitable. Dissemination of cost-effective capture and flaring incorporation options. Training for the design, installation, operation and maintenance of biogas capture and flaring facilities. **OBSTACLE:** there is no obligation for industries to capture methane, so the incorporation of methane is not mandatory. systems with capture (plugged lagoons, catchment reactors) is not taken as a priority. Lack of awareness of their impact on the environment.
Technology transfer
EMPTY: systems installed and operating without capture. Difficult to retrofit (in the case of some) for technological or location reasons for the subsequent use of biogas. **NEED:** incorporation of capture technologies (and use of biogas), with low payback time for each type of industry. There are economies of scale, which determine minimum sizes for profitability of biogas plants, appropriate technologies are required to make these cases profitable. For the thermal utilization of biogas it is necessary to retrofit or replace boiler burners. **OBSTACLE:** higher degree of knowledge for its operation. Lack of dissemination. There are few distribution channels. technology, equipment suppliers and specialized technical service in the field.

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MEASUREMENT CDN 1 / WASTE
Closure of open-air landfills, construction of sanitary landfills and design of new disposal solutions that promote intra- or interdepartmental regionalization (PNGR).
Financial resources
EMPTY: Insufficient funds for the closure of open dumps and for the construction of sanitary landfills. Lack of political agreements to develop regionalized final disposal projects. **NEED:** financial resources for the closure of open dumps and construction of sanitary landfills. Lack of budgeting for this type of project. Socio-productive inclusion solutions for sorters. informal workers working in these landfills are currently inadequate. **OBSTACLE**: Lack of national and departmental budget allocated and of means of financing for its in- version and maintenance. Lack of collection mechanisms for the recovery of waste management costs by the municipalities (fees for the collection of household waste and fees for the final disposal of non-household waste).
Capacity building and technical assistance
GAP: Insufficient technical capacity at the departmental level for the planning and execution of waste management actions involving the reduction of emissions. Lack of strategies and projects to reduce the final disposal of mixed waste to reduce its final disposal. Lack of knowledge about the implications of waste burial in terms of GHG emissions (methane). **NEED:** technical assistance to define cost-efficient options to rationalize waste management to departmental level, towards cities with zero-waste-to-disposal strategies, taking into account possible forms of financing, sources of funds and changes in business models. **OBSTACLE:** Lack of human resources in the intendancies dedicated to this study. Lack of synergy between the different the different divisions of the municipalities, the weak cost structure of the waste management system, which hinder the strategic analysis
Technology transfer
GAP: Insufficient exchange of learning and knowledge among municipalities on technologies and procedures for waste transfer, landfill closure and landfill operation. Insufficient approach in terms of circular economy, of other special waste streams that arrive at the SDF (ROC, pruning, bulky waste). **NEED:** Development of solid waste management alternatives other than SDF: recycling, composting, different processes of recovery, reuse, etc. Development of circular economy business models that minimize waste generation. **OBSTACLE:** Rootedness to the traditional waste management operation with a purely clean-up vision. of the city (*status quo* bias).
Decrease waste disposal rates so that final disposal is not the basis for waste management. (PNGR).
Financial resources
EMPTY: Insufficient local capacities for the valorization of some materials, dependence on regional prices of recycled materials and international prices of their substitutes in virgin raw materials. Limited economic viability for investments to expand these capacities. **NEED:** Financial resources to expand, strengthen and standardize the segregation channels at origin and destination. valorization of recyclables and organics. **OBSTACLE:** Gap in the implementation of selective collection schemes (it is expected that with the actions promoted by Ministerial Resolution 271/021 and the regulation of other waste fractions, this gap will be narrowed). Limited options for the commercial disposal of recovered materials threaten the economic viability of formalized sorting enterprises and cooperatives".
Capacity building and technical assistance
EMPTY: Weaknesses in the technical capacities of the departmental municipalities for the design and implementation of plans to reduce waste generation and implement selective collection programs to make the recovery of fractions viable. Insufficient coordination between different municipal, departmental and national waste recovery programs. Lack of articulated education and participation programs that promote behavioral change in the population to join circular economy strategies. Few initiatives for the socio-productive integration of informal classifiers. **NEED:** Environmental education to raise awareness of regulations, rules and best practices and programs to encourage citizen participation in order to stimulate behavioral change in the population. **OBSTACLE:** Lack of human and economic resources. Stability of the technical teams in the departmental intendancies.
Technology transfer
EMPTY: Selective collection systems with insufficient geographic scope and recovery percentages to preferentially direct waste streams to alternative management systems to burial. Lack of adoption of technologies for the valorization of some waste streams. **NEED:** incorporate new technologies to valorize larger quantities and larger waste streams. Adopt- The circular economy business models that minimize waste generation (e.g. eco-design, *product as a service*, sharing economy, use of by-products, biomass cascading, etc.) **OBSTACLE:** lack of allocation of material and/or economic resources for the incorporation of technologies that minimize waste generation or allow its use, thus reducing the associated GHG emissions. emissions from waste burial (avoided emissions).

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MEASUREMENT CDN 1 / WASTE
Implement solutions focused on preventing, minimizing and properly managing Food Loss and Waste (FWL) in key sectors of the agri-food chain (PNGR).
Financial resources
EMPTY: lack of funds for the design and implementation of a PDA prevention program during the primary and post-harvest agricultural production phases and in the food industry. Lack of specific plans and programs with an integrated view of the production, distribution and supply chain. food sales. **NEED:** Implement the National Strategy for the Prevention and Reduction of Food Losses and Waste. Position food valuation and achieve the appropriation of measures to reduce FWL in all sectors of the chains. **OBSTACLE:** Need for more specific funding. Raise awareness among the different stakeholders on the importance of reducing the cir PDA.
Capacity building and technical assistance
GAP: Insufficient trained human resources for the development of ADP reduction strategies. **NEED:** design and implement training for agricultural producers, the processing industry and the distribution and sales chain in the incorporation of ADP prevention measures. Design projects and programs to make PDA reduction processes viable. **OBSTACLE:** PDA approach still weakly included in the public agenda. Lack of perception of the importance The company's efforts to reduce ADP and the consequences of the losses in relation to the environment, CC emissions and food security.
Technology transfer
GAP: insufficient number of studies aimed at minimizing ADPs in agricultural production, food processing industries, and food processing plants. food and logistics chain for warehousing, distribution and sales **NEED:** Promote good practices to prevent and reduce PDA. Development of demonstration projects to promote actions in key sectors of all chains. **OBSTACLE:** lack of specific resources and little research on the subject.
MEASUREMENT CDN 1 / WASTE
Implement a traceability system for the different waste streams, which provides detailed information on the waste streams material flows of the different streams in order to facilitate the control and monitoring of operations (PNGR).
Financial resources
GAP: Insufficient resources allocated for the development of traceability in all waste streams. Lack of conceptual design of the financing system for the traceability system as a whole to ensure traceability of all waste streams. **NEED:** Design of financing mechanisms to ensure the sustainability of the traceability system. of waste in all its streams. **OBSTACLE:** Fear of private operators regarding access to information High levels of informality in the waste commercialization chain.
Capacity building and technical assistance
EMPTY: Shortage of trained personnel for the implementation and operation of a waste traceability system. **NEED:** technical assistance for the design and development of the household waste traceability system. **OBSTACLE:** Capabilities of the departmental intendancies.
Technology transfer
VACUUM: Mechanisms for control and monitoring of household waste management **NEED:** Design, development and implementation of a household waste traceability system that can be integrated with other traceability subsystems already under development. **OBSTACLE:** Operational capacities of the departmental intendancies.

Annex 13

Annex 013

H2U

Roadmap for **green hydrogen and derivatives** in Uruguay

Ministerio
de Industria,
Energía y Minería

Roadmap for **green hydrogen and derivatives** in Uruguay

Interinstitutional group:

Ministry **of Industry, Energy and Mining**
Ministry **of Environment**
Ministry **of Foreign Affairs**
Ministry **of Economy and Finance**

Planning and Budget Office
Ministry of **Transportation and Public Works**
Ministry of **Housing and Territorial Planning**
Ministry of Defense Ministry of Public Works and Transportation Ministry of **Housing and Territorial Planning** Ministry of **Defense**

With the collaboration of:

ANCAP · ute · ANII · ANP Administración Nacional de Puertos República Oriental del Uruguay · auci Agencia Uruguaya de Cooperación Internacional · CONICYT · LATU · Uruguay XXI Promoción de Inversiones, Exportaciones e Imagen País · URSEA Unidad Reguladora de Servicios de Energía y Agua · ANDE Agencia Nacional de Desarrollo

With support:

BID Mejorando vidas

This document is the result of the work of the inter-institutional group on green hydrogen and derivatives coordinated by the MIEM, the consultation process carried out with the private sector, civil society and academia, and with the support of the IDB during 2021 and early 2023.

This report has been prepared with special concern for the use of expressions and concepts that do not exclude people on the basis of their gender. In some cases, in order to avoid grammatical overload, the generic masculine has been used on the understanding that this designates men and women indistinctly, without this being interpreted as a sexist use of language.

The reference to this document is: Roadmap for Green Hydrogen and its derivatives in Uruguay, MIEM 2023. www.miem.gub.uy | www.hidrogenoverde.uy

This document is a technical input prepared by the aforementioned inter-institutional group so that the Uruguayan State can design the necessary public policies to develop the green hydrogen industry and derivatives. In any case, this document does not constitute any legal obligation.

Design: 3Vectores / Laura Scaron

Photos: MIEM photo bank, from UruguayXXI and unsplash.com.

ACRONYMS

ANCAP	National Fuels, Alcohol and Portland Administration
ANII	National Agency for Research and Innovation
ANP	National Port Administration
IDB	Inter-American Development Bank
CONICYT	National Council for Innovation, Science and
Technology DINACEA	National Directorate of Environmental Quality and
Evaluation DINAGUA	National Water Directorate
DRI	Direct Reduced Iron (Direct Reduced Iron) *Offshore* Wind
Energy Energy generated by wind turbines located at sea *Onshore* Wind Energy	
E n e r g y generated by wind turbines located on land	
ESG Factors	Environment, Social and Governance Factors (Environment, Social and Governance Factors)
GW	GigaWatt
Gt	Gigatonnes
e-Jet Fuel	Aviation fuel, in this case, made from green hydrogen LATU
	Technological Laboratory of Uruguay
MA	Ministry of Environment
MEF	Ministry of Economy and Finance
MIEM	Ministry of Industry, Energy and Mining
MDN	Ministry of National Defense
MVOT	Ministry of Housing and Land Management
MRREE	Ministry of Foreign Affairs
Mt	Megatonnes
MTOP	Ministry of Transportation and Public Works
SDGS	Sustainable Development Goals
IMO	International Maritime Organization
OPP	Planning and Budget Office
GDP	Gross Domestic Product
SAF	Sustainable Aviation Fuel
SYNFUEL	For this document, synthetic fuel made from green hydrogen.

TCO	Total Cost of Ownership (Total Cost of Ownership)
URSEA	Energy and Water Services Regulatory Unit
USD	U.S. Dollars
UTE	National Administration of Power Plants and Electric Transmissions (Administración Nacional de Usinas y Trasmisiones Eléctricas)

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Green Hydrogen and new energetics

A strategy towards prosperity supported by our competitive advantages, to give impulse to the new green economy as a source of development

Our country has embarked on the second energy transition, which aims at the next step in the reduction of fossil fuel consumption, contributing to the national goal of achieving carbon neutrality by 2050, according to the Long Term Climate Strategy presented by Uruguay in 2021. This second energy transition is based on three pillars: **energy efficiency, electric mobility and electrification of demand in general,** and finally, for uses that are more difficult to decarbonize, **the commitment to green hydrogen and its derivatives.**

Hydrogen, when produced by electrolysis of water using renewable electricity, is called green hydrogen. In this way, an energy source that does not come from a fossil fuel source is achieved, which can be used to decarbonize applications such as long-distance road transport, energy-intensive industry, maritime and air transport, among others.

Hydrogen is a substance that has been widely used for many decades in many different applications. Therefore, when this hydrogen is green, all these applications and products derived from hydrogen will generate green solutions, not dependent on fossil sources.

Thus, hydrogen can be used in a fuel cell to regenerate electricity, either to power a cellular radio base in a remote territory, or to move an electric vehicle (so-called hydrogen vehicles), among other applications of fuel cells. It can also replace natural gas in many applications that require heat production. It can also be used to hydrogenate oil and produce HVO, a precursor for synthetic, green fuels. Or hydrogen can be used to reduce iron oxide (iron ore extracted from mines) to produce iron (Direct Reduction Iron = DRI) and also steel without using fossil fuels, one of the most difficult industrial processes to decarbonize.

But also, and this is where the country has its own opportunity, it is possible to combine hydrogen with carbon dioxide (CO2) of biological origin (biogenic CO2) and produce methanol, which will be green methanol, and from it gasoline, diesel or aviation jet, fuels identical to those known, but synthetic, i.e. not derived from oil.

Our country has a significant production of biogenic CO2, both from biomass plants, which burn forestry or agricultural waste to produce electricity, and from biofuel production processes, which emit CO2 as a result of fermentation, or other agro-industrial processes. We can therefore produce these new energy sources, exact substitutes for conventional fuels, from our renewable resources (which are transformed into green hydrogen) and from waste from our agro-industrial chains.

Can we produce the renewable electricity required? Our country has much more renewable resources on its territory than it would need to support its current and future needs. As has been demonstrated, the wind and sun in our territory are ideal for generating renewable electricity, but also, according to all studies, their potential is much greater than what our electricity system will need in the future. The wind and the sun in Uruguay are complementary resources, because generally their greatest intensity occurs at different times of the day, and at different times of the year.

different seasons of the year. In other words, combining both sources results in more stable electricity generation than using only one of them. In addition, the best locations for solar and wind sources are in approximately the same areas, which are also close to those with abundant biogenic CO2.

Water is also very abundant in our country, and its use for the green hydropower strategy will be much lower than the current agricultural, industrial and residential uses that are registered today. As will be seen in detail, Uruguay is a country where the development of this industry will not affect the water resource, if it is managed in a professional manner and seeking the sustainability of the different water courses and reservoirs.

Finally, the country's stability, its transparent legal framework, its attractive business environment, its reputation for honoring contracts and honoring its commitments are well known. It is therefore an attractive location for these large projects.

If the country has abundant resources to generate renewable electricity, has water and has biogenic CO2, and in volumes far in excess of the demands that our economy will require, it is the right place to develop a new export industry for green energy products, capable of attracting investment in large-scale projects, capable of providing the world with adequate resources for the energy transition that is needed.

Uruguay will develop a new green energy export industry, an industry based on indigenous resources, but an industry that will add value, generate employment, attract investment and technology. Our energy transition strategy will become a new source of added value for the national economy, with a potential similar to our traditional exports. Most importantly, this industry will contribute to the well-being of our people, with quality jobs, with works and investments, a decentralized territorial industry, a true new standard in our agro-industrial chains. It is a great opportunity that we must be able to take advantage of, which will position us as a world leader. It is a step on the road to development. We cannot let it pass us by.

Omar Paganini,
Minister of Industry, Energy and Mining

FOREWORD

EXECUTIVE SUMMARY

1. EXECUTIVE OVERVIEW

The ambitious decarbonization targets for 2050, established at a global level, lead to the need to promote accelerated and significant changes, both with respect to the energy sources used and the use of raw materials consumed in different industrial processes.

Our country has practically decarbonized its electricity matrix, and has positioned itself in a prominent place worldwide, with a participation of more than 90% of renewable energies (94% in the period 2016-2022). To continue with this achievement, the challenge at the local level is to decarbonize the rest of the energy matrix (today with approximately 40% of fossil origin), mainly in the transportation and industrial sectors.

To this end, both locally and globally, the low-emission energy transition, requires new sources of energy. This is because in certain sectors of activity, emissions are very difficult to reduce because they cannot use renewable electricity directly (e.g. maritime, aviation or some industrial sectors). This implies that greater efforts must be made to diversify renewable energy sources to have greater resilience over time and a decrease in future risks.

In this context, the production of new, more renewable energies and, in particular, green hydrogen, produced from water and renewable energies and with the capacity to decarbonize different uses (transportation, industry, power generation and raw materials), has positioned itself as an energy vector of great relevance on the global agenda. In a projected scenario

With high demand in both Europe and East Asia, there will be countries that will be importers and countries that will be exporters of low-emission hydrogen. Uruguay has the conditions to be among the latter.

This document presents the potential key areas of development of the green hydrogen and derivatives economy for the country, the goals that could be achieved, as well as the main challenges to be addressed. The analysis was carried out based on the availability of resources at the national level, the progress of technological development, the investigation of market conditions, the analysis of competitors and the socio-environmental benefits that could be generated for the country.

The quality, abundance and complementarity of the country's wind and solar resources would make it possible to continue the energy transition process by achieving competitive costs in hydrogen production at scale. By 2030, green hydrogen production costs could reach 1.2- 1.4 USD/kg, with a renewable energy installation potential of more than 90 GW of power in the sites with the best wind and solar resources.

On the other hand, the country has special potential to produce new products based on green hydrogen, such as fuels, raw materials for industry and green fertilizers. This requires carbon dioxide (CO2) of plant origin, which could be obtained from national industries that use sustainable biomass in their production processes. H2-derived products could use the logistical infrastructure and ports available in the country for marketing and export.

Decades of experience in the development of renewable energy projects; solid regulatory frameworks; political, institutional and legal stability; and macroeconomic soundness make Uru- guay an attractive place for sustainable investment and in particular for the development of hydrogen projects and derivatives for the local market and for export.

Within this framework and based on a rational and balanced management of its natural resources, the Uru- guay could aim, in a first phase, to a **domestic market for the use of hydrogen and hydrogen derivatives for heavy and long-distance transport as well as for the production of green fertilizers.** This market could be driven by an **export market for hydrogen derivatives such as green fuels and feedstocks.** In the final stage, hydrogen and green ammonia could be exported directly, and offshore green hydrogen production could be developed.

By 2040, hydrogen production could approach **one million tons per year**. This will require the installation of approximately **18 GW of renewable energy and 9 GW of electrolyzers.**

One of the main challenges is to carry out coordinated and orderly planning, creating regulations that provide certainty to both the population and project developers, in coordination with the various national institutions. It will be necessary to promote a communication and citizen participation plan, generate capacities at the national level, promote research and innovation, and analyze the need for common infrastructures from the initial stages of development.

Green hydrogen and its derivatives represent a turnover opportunity for Uruguay of approximately US$1.9 billion per year by 2040.

The development of the vertical hydrogen industry could generate more than 30,000 direct skilled jobs in plant construction, operation and maintenance, logistics and technical education. It could enable the development of a new socio-economic growth sector.

and contribute to the decarbonization of other national productive activities.

The development of a green hydrogen economy at the national level will contribute to the diversification of the national productive matrix, by increasing added value through a new industrial link and developing export potential to new markets worldwide, with the consequent significant contribution to economic growth.

The Uruguayan State places green hydrogen as a priority instrument in its sustainability program.

Annex 14

Ministerio de Economía y Finanzas | Ministerio de Ambiente | Ministerio de Ganadería Agricultura y Pesca

THE WORLD BANK IBRD • IDA

December, 2023

URUGUAY

Green and Resilient Growth Development Policy Loan

Interest Rate Step-Down Mechanism to Incentivize Provision of Global Public Goods

On November 16th, 2023, the Board of the World Bank approved a new Development Policy Loan (DPL) for Uruguay for USD 350 million. The loan includes the groundbreaking feature of a step-down in interest payments based on verifiable performance against ambitious climate targets. This note summarizes the instrument's environmental goal-driven design, the innovative financial mechanism, and the reporting and verification framework underpinning it.

I. Objective

1. The objective of the financial mechanism is to reinforce positive incentives for the Government of Uruguay (GoU) to achieve ambitious environmental goals during the IBRD loan repayment period. The loan allows for a reduction in the interest rate paid if Uruguay overperforms beyond its Nationally Determined Contributions (NDC) targets for reducing the intensity of methane gas emissions derived from livestock production, as set by the country under the Paris Agreement.

2. Building on the model of the US$1.5 billion sovereign sustainability linked bond (SSLB) pioneered by Uruguay in October 2022, the proposed mechanism responds to the commitment set out in the World Bank Group's (WBG's) Evolution Roadmap[1] to develop approaches for providing concessionality to incentivize countries to address global public goods (GPGs), through the introduction of long-term performance-based incentive mechanisms, including interest buydowns. The financial mechanism introduces two innovative features to WBG financing modalities by: a) incorporating an interest stepdown provision in the standard WB financing agreement; and b) extending WB capacity to incentivize GPG outcomes beyond project closing. Through its leadership on the IMF/WB Development Committee, the Government of Uruguay has made substantial efforts to advance innovative instruments to encourage the provision of GPGs through positive financial incentives and has been a strong supporter of the objectives of the IBRD Fund for Innovative Global Public Goods Solutions (the GPG Fund).

3. This sovereign sustainability-linked loan (SSLL) from the WB introduces several further innovative features in line with the Evolution Roadmap that: (a) provides financial incentives for overperformance of increasingly ambitious climate targets, based on commitments set by Uruguay in its NDCs under the Paris Agreement; (b) reinforce partnerships between multilateral institutions in supporting the achievement of national environmental goals through robust reporting and credible external verification of climate-related indicators; and (c) focus on providing positive incentives to countries for their provision of GPGs through a step down-only approach.

[1] Evolving the World Bank Group's Mission, Operations, and Resources: A Roadmap. WBG, December 2022

4. This SSLL is the product of a "whole-of-government" approach, jointly undertaken by the Ministry of Economy and Finance, the Ministry of Environment and the Ministry of Agriculture, Livestock and Fisheries of Uruguay. Close collaboration with the WB's technical teams was essential in the development of this loan instrument.

II. Approach

5. The SSLL embeds a Key Performance Indicator (KPI) related to the reduction in the intensity of methane emissions as a share of cattle beef production in Uruguay. Given that livestock production is an integral part of the economic fabric of the country, the selected KPI is core, relevant aligned with the country's sustainability strategies. The KPI targets represent ambitious and demanding commitments, particularly in light of the headwinds from the recent drought in Uruguay (the most severe in one hundred years). It also provides additionality to the SSLB's KPIs, which focus on the reduction of aggregate greenhouse gas emissions intensity and conservation of native forests at a whole-of-economy level.

6. The proposed financial mechanism of the SSLL has the following distinct features, compared with the SSLB:

- it will not include an interest rate increase if KPI targets are not met (as in the case of the SSLB); instead, interest payments would remain at (or revert to) standard IBRD terms.
- the amount of the interest rate reduction was determined such that achievement of the respective KPI targets in each of the ten years of the performance period will lead to a maximum US$12.5 million reduction in the total interest paid over the maturity of the loan.[2] As a result, the interest rate stepdown (of up to 100 bps per year, as described below) exceeds the contingent coupon stepdown established for the SSLB (15bps per year, for each KPI).
- determination of the interest rate stepdown will be made annually during the performance period (rather than only once at the mid-point maturity of the SSLB), to further incentivize continuous achievement of the KPI targets throughout the maturity of the loan.

III. Proposed Indicator and Targets

7. The use of the indicator of methane intensity of beef cattle production: (i) highlights the breadth of Uruguay's commitments to climate action by employing a macroeconomically significant KPI in addition to the ones used for the SSLB; and (ii) strengthens the case for use of concessional resources from the World Bank's (WB's) GPG Fund, by providing additionality beyond the expected impact of the SSLB. Taken together, the KPIs embedded in both the market-based and multilateral sustainable finance instruments demonstrate Uruguay's determination to pursue a sustainable development path that combines higher growth and productivity in the beef sector with its commitment to zero deforestation. Uruguay's Livestock and Climate pilot project (Ganadería y Clima)[3] has worked with farmers to generate innovative proof-of-

[2] It should be noted that the WB and GoU have agreed to consider the possibility of applying for additional financing for the buydown as an incentive for early achievement of the KPI targets, if new financing becomes available from one or more countries from Annex I of the United Nations Framework Convention on Climate Change.

[3] *Ganadería y Clima* is a pilot project with funding of US$1.2 million from a partnership between the UNEP-convened Climate and Clean Air Coalition (CCAC), GEF, FAO, and Ministry of Livestock, Agriculture and Fisheries.

concept solutions based on science for improved livestock management practices that reduce the methane emission intensity of meat production and increase productivity and profitability, supporting achievement of the ambitious targets of the proposed interest buy-down.[4] Potential interest savings on the SSLL will be channelled to climate-smart agricultural projects in Uruguay to advance sustainable livestock production practices, among other climate action measures.

8. The KPI regarding the reduction of methane intensity is established as a measure for action on mitigation of greenhouse gas emissions in Uruguay's NDC1 (with targets set for 2025) and NDC2 (with targets set for 2030), with increasing levels of ambition. The targets for this KPI will reflect Uruguay's NDC commitments as follows:

- KPI**:** reduction of the intensity of emissions of methane from bovine cattle per unit of live weight beef, with respect to the reference value for the observation year 1990.[5]
- Achievement of targets during the 2028-2032 performance period. The unconditional target on methane intensity reduction set in the NDC1 is 32 percent, to be met by 2025. The interest buydown would apply if the more ambitious target of 33 percent reduction in the intensity of methane emissions with respect to the reference value is met or exceeded. Given the lags associated with the calculation, estimation and verification of the KPI, years 1-5 of the performance period will span from 2028 to 2032 (referring to observation years 2025-2029).
- Achievement of targets during the 2033-2037 performance period. The unconditional target for methane intensity reduction set in Uruguay's NDC2 is 35 percent, to be met by 2030. A higher level of interest rate buydown will apply in this second half of the performance period if the reduction of methane intensity is 36 percent or more, reflecting overperformance of the higher level of ambition established under NDC2 (which is significantly more demanding than NDC1). In turn, the smaller amount of interest buydown corresponding to the first half of the performance period will apply in these latter years if the reduction is below 36 percent, but at or above 33 percent. Given the lags associated with the calculation, estimation and verification of this indicator, years 6-10 of the performance period will span from 2033 to 2037 (referring to observation years 2030-2034).
- Buffer year 2038. If a target is missed in an earlier year, the foregone nominal dollar amount of the interest payment reduction may be applied if the same target is achieved in this buffer year, subject to (i) the interest payment cannot become negative, and (ii) the total amount of the buydown may not exceed US$12.5 million.[6] This flexibility will only apply for a single year of the overall performance period in which a target is missed.
- Latest official value[7]: 28 percent reduction (corresponding to 2018). The next updated value (corresponding to 2021) will become available by May 2024.

[4] It also builds on the WB's engagement in the livestock sector over the years through lending operations such as the ongoing Uruguay Agro-Ecological and Climate Resilient Systems project (P176232).

[5] The reference value is calculated as the average of the intensity of emissions of methane per unit of product (live weight beef) over the period 1987 to 1991, excluding the maximum and minimum intensity values (i.e., the truncated average of three annual values).

[6] Noting that the WB and GoU have agreed to consider the possibility of applying for additional financing for the buydown as an incentive for early achievement of the KPI targets if new financing becomes available from one or more countries from Annex I of the United Nations Framework Convention on Climate Change.

[7] As of the Board date (November 2023).

- Calculation of the indicator and frequency. Truncated five-year rolling average annual data, reported and externally verified two years and five months after the corresponding observation date. For the calculation of the KPI value, and its assessment compared to the respective targets, the result of the formula will be rounded up or down to the nearest integer, consistent with the way the numerical goals were set under Uruguay's NDC1 and NDC2, as well as in the SSLB Framework.

IV. KPI Methodology and Reporting

9. The KPI calculates the intensity of methane emissions derived from enteric fermentation and manure management of non-dairy beef cattle (excluding sheep and lamb), per unit of live weight beef product.

10. The methodology used to calculate the performance of the KPI will be the same as that employed by Uruguay to report NDCs progress data to the United Nations and is consistent with the SSLB Framework. The estimate of emissions will apply the IPCC 2006 Guidelines, or subsequent versions or refinements as agreed by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), and nationally appropriate methods consistent with that guidance.

11. Starting in 2024, reporting of methane emissions from the beef cattle sector per unit of live weight beef product will be done at annual frequency, in line with the standards of the most developed economies (and beyond Uruguay's requirements under the Paris Agreement).

12. Consistent with the NDC1 and NDC2 presented by Uruguay, the KPI statistic on methane intensity is calculated on a truncated five-year rolling average to smooth inter-annual (primarily weather-based) variation, with the average for the observation year incorporating data from the three preceding years and the following year, with the maximum and minimum values excluded.[8]

V. External Verification and Publication

13. Building on the external verification services already contracted for the SSLB, and thereby strengthening collaboration between development partners, the World Bank and the United Nations Development Program (UNDP) will agree on contractual terms for UNDP to be the independent verification agency for the additional KPI being considered in this SSLL.

14. The verification process will assess the beef cattle methane emissions data collected annually as part of the GHG emissions intensity KPI of the SSLB, as well as annual beef production data to calculate the methane emissions intensity per unit of live weight beef. The World Bank and UNDP will agree on contractual terms to verify the calculation of the methane emissions intensity statistic.

[8] For example, the KPI value corresponding to year 2025 (NDC1 target year), is calculated as the truncated average (i.e., excluding min and max) of intensity values for years 2022, 2023, 2024, 2025 and 2026. Thus, this observation will be calculated in 2027 (when the 2026 data is reported with a one-year lag) and verified by May 2028 (that is, five months after the observation is officially calculated).

15. The external review by UNDP will be conducted according to the methodology contained in the UNFCCC's Guide for Peer Review of National Greenhouse Gas Inventories.[9] In addition, the review will contain a conclusion on the inventory quality, assessed primarily through the examination of the inventory indicators and principles related to Transparency, Accuracy, Consistency, Comparability and Completeness (TACCC principles), established for reporting in the IPCC 2000 and 2003 Good Practice Guidance and also incorporated in the 2006 IPCC Guidelines. Considering the methodology used by Uruguay to prepare the inventory, its adherence to the indications provided in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and any subsequent version or refinement approved by the CMA, will also be examined.

16. Given the formula to calculate the KPI values, allowing for an additional year and five months to report and externally verify the data, the statistic at the start of the performance period in 2028 will relate to 2025 (the target date for NDC1), the statistic at the start of the second half of the performance period in 2033 will relate to 2030 (the target date for NDC2), while the statistic at the end of the performance period in 2037 will relate to 2034.

17. UNDP will provide Verification Reports annually starting in 2024 and through the maturity of the loan, no later than May 31st of the year following the relevant reporting year for the KPIs. It will provide verification of the KPI level reported by the GoU at the observation year against each KPI target. It will also contain additional quantitative and/or qualitative information to facilitate monitoring of progress towards targets.[10]

VI. Built-in Incentives for Early Achievement and One-off Flexibility for a Missed Target

18. To incentivize early achievement of the more ambitious target of 36 percent reduction, the incremental level of interest rate stepdown will be made available a year ahead of the NDC2 target date (i.e., in 2032, corresponding to data for 2029), with corresponding reductions in the buydown amount available for the final two years of the performance period, if applicable. In addition, flexibility will be provided such that if a KPI target is missed during the performance period, at the request of GoU the nominal value of the foregone interest buydown amount for a single year in which a KPI target is missed may be applied as a reduction of interest in year 11 (“buffer year”) of the repayment period, provided the missed KPI target is achieved in that year. These reductions in interest payments will be provided subject to the conditions that: (i) in no year may interest repayments become negative; and (ii) the total value of the interest repayments cannot exceed US$12.5 million. If no target is missed in previous years, the interest payment in year 11 will revert to standard IBRD terms (see Table 1).

[9] https://unfccc.int/files/national_reports/non-annex_i_natcom/application/pdf/final_guide_for_peer_review_report_final_webupload.pdf

[10] The verification report will be delivered to the Bank once a year, four months in advance of one of the payment dates selected by the Government, since the Bank issues the invoice two months in advance of the payment date and requires two additional months to review the report and apply the interest buydown, if applicable, to the next period. For purposes of verifying achievement of the KPI targets, GoU will provide to the Bank and UNDP the information, data, and other evidence supporting the achievement, or lack thereof, of the KPI targets at least five months prior to the KPI’s respective Target Verification Date.

VII. Interest Rate Step-Downs for the Proposed Mechanism

19. The potential interest rate reductions (in basis points) over the performance period were calibrated such that: (i) the annual potential step-down will be the same within each sub-period; (ii) the interest rate stepdown will be higher for years 6-10, compared to years 1-5, to reflect increasingly demanding targets for methane intensity reductions associated to the NDC2, compared to NDC1; and (iii) achievement of the lower KPI target in every year 1 to 5 of the performance period, followed by achievement of the higher target in every year 6 to 10, will lead to a maximum US$12.5 million reduction in the total interest paid over the life of the loan. It should be noted that the dollar amount of the buy-down in any given period cannot exceed the amount of the interest payment (i.e., a negative interest rate will not be possible) and there will be no reduction of the loan principal.

Table 1: Performance Period - KPI Targets, Observation, Reporting and Verification Years

Performance Year	Verification Year	Reporting Year	Observation Year	Higher Target (%)	Lower Target (%)
1	2028	2027	2025	-	33
2	2029	2028	2026	-	33
3	2030	2029	2027	-	33
4	2031	2030	2028	-	33
5	2032	2031	2029	-	33
6	2033	2032	2030	36	33
7	2034	2033	2031	36	33
8	2035	2034	2032	36	33
9	2036	2035	2033	36	33
10	2037	2036	2034	36	33
Buffer Year: 11	2038	2037	2035	36	33

Note: consistent with the NDC1 and NDC2 presented by Uruguay, the KPI value is calculated on a five-year rolling truncated average, with the central year incorporating data from the three preceding and the following year. Allowing for an additional year and five months to report and externally verify the data, the statistic at the start of the performance period in 2028 will relate to 2025 (the target year for NDC1), the statistic at the start of the second half of the performance period in 2033 will relate to 2030 (the target year for NDC2), while the statistic at the end of the performance period (2037) will relate to 2034.

Financial Terms

20. The financial terms of the approved IBRD loan with provision for performance-based interest reductions as described above, are summarized in Table 2:

Table 2: Financial Terms of the IBRD Loan with Performance-Based Interest Rate Reduction

Loan with 15.5yr maturity and 4yr grace period	
Average Repayment Maturity (ARM, in years)	9.89
Payment dates	April and October
First amortization payment	April, 2028
Last amortization payment	April, 2039
Semi-annual principal repayment	$ 15.2MM
Performance period	2028 – 2037
Buffer year	2038
Interest rate reduction tied to lower KPI Target and maximum total nominal interest payment reduction through first performance period	50 bps ($ 6.7MM)
Interest rate reduction tied to higher KPI Target and maximum total nominal interest payment reduction through second performance period	100 bps ($ 5.8MM)

21. During each of the first five years of the performance period, Uruguay may receive an annual interest rate reduction of 50bps if it achieves the lower target (33 percent or more reduction in the KPI) in a given year, or regular IBRD terms (no stepdown) if the lower target is not achieved. During the last five years of the performance period, when the more ambitious target kicks in, Uruguay may receive annually a higher interest rate stepdown (100 bps) if it achieves the highest target (36 percent reduction or more) in a given year, the same stepdown as in the first five years (50bps) if it only achieves the lower target (33 percent or more reduction, but less than 36 percent), or regular IBRD terms (no stepdown) if the lower target is not achieved. During the performance period, the KPI will be checked in the first semester of a given year and if the target is achieved, the corresponding basis point interest reduction will be applied in the following two semester payment dates.

22. The terms of the SSLL compare with the standard terms for an IBRD loan as follows: assuming the same loan structure (4-year grace, 15.5-year final maturity)[11], Uruguay would pay SOFR plus a variable spread[12] (which is 109 bps as of the date of this Note) for the life of the loan. In both cases, the regular fees would apply.[13] In summary, the buydown offers Uruguay the same regular financial terms as a baseline, with the potential to receive a discount of up to $12.5 million over the maturity of the loan, if the corresponding KPI targets are achieved every year.

[11] IBRD's variable spread depends on the average repayment maturity (ARM) of the loan. Uruguay typically chooses loan structures with the ARM up to 10 years.
[12] IBRD's variable spread is calculated and published every quarter. See https://treasury.worldbank.org/en/about/unit/treasury/ibrd-financial-products/lending-rates-and-fees .
[13] Upfront fee of 0.25 percent of the loan's total amount and commitment fee of 0.25 percent per year. applied to undisbursed balances.

Annex 15

[Unofficial Translation]
Annex (15)

Ministry of the Environment

Uruguayan Delegation at COP28

Uruguay calls to assume responsibilities in the face of climate change

https://www.gub.uy/ministerio-ambiente/comunicacion/noticias/uruguay-realizo-llamamiento-asumir-responsabilidades-ante-cambio-climatico

09/12/2023

During the presentation of Uruguay's position at the High Level Segment of the Conference on Climate Change organized by the United Nations (COP28), the Minister of the Environment, Robert Bouvier, urged that developed countries assume their greatest responsibility in the climate crisis to implement urgent and substantive measures to confront it.

Within the framework of his participation in the COP28 taking place in Dubai, the representative of the Uruguayan government aligned his speech, during the High-Level Segment for Heads of State and Government, to the slogan defined by the UN for this instance that establishes that climate action cannot wait.

In this area, Bouvier reiterated Uruguay's position by highlighting that in our country "political priority has been assigned to actions to adapt to climate change and therefore enormous planning efforts have been made to have plans focused on the agricultural sector. cities and infrastructure and in the coastal zone, all of them aligned with the National Climate Change Policy."

In this sense, Uruguay is presented as a country where national climate policies and actions are addressed through the National System of Response to Climate Change, a space that has operated continuously and consolidated since 2009 and has been strengthened since of the creation of the Ministry of the Environment in 2020.

The Minister of the Environment reiterated the country's commitment to contributing to the mitigation of climate change: "Uruguay has inter-institutional work that is an example worldwide and that has allowed the issuance of a sovereign bond associated with environmental indicators and the realization of a loan with the World Bank that links the interest rate to the fulfilment of climate objectives."

This strong and ambitious commitment positions us as "a pioneer country in the implementation of early mitigation measures, reaching percentages greater than 95% of renewables in the electrical matrix, and through policies that promote increasingly sustainable agricultural production, protecting natural ecosystems, biodiversity and soils from erosion," said Bouvier.

At different summits, Uruguay has signed various agreements to reduce emissions and generate actions to care for the environment and has acted accordingly based on these commitments. Despite this, the Minister of the Environment claimed the need to have the support of developed countries to face these challenges, "we continue to be concerned with the lack of implementation of the financial goals of developed countries according to the Convention and the Paris Agreement. "This has a negative impact on the ability of developing countries to implement their national climate change policies and plans."

In that sense, Bouvier recalled that Uruguay is affected by climate change and that the country's actions, which have led to this climate crisis, are marginal: "the challenge is great, the need for greater action is urgent and very serious challenges persist. relevant issues that must be addressed, promises that must be fulfilled, particularly for developing countries."

"The principle of common but differentiated responsibilities is a cornerstone of the Convention and the Paris Agreement, and it must also be so in this Conference. We share responsibilities, but not all of us have the same degree of responsibility," stated the leader.

Videos

https://youtu.be/7M-f7wzYx10