

INTERNATIONAL COURT OF JUSTICE

DISPUTE OVER THE STATUS AND USE OF THE
WATERS OF THE SILALA

(CHILE v. BOLIVIA)

**COUNTER-MEMORIAL OF
THE PLURINATIONAL STATE OF BOLIVIA**

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3 SEPTEMBER 2018

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OF THE PLURINATIONAL STATE OF BOLIVIA**

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CHAPTER 1

INTRODUCTION

A. Procedural History

1. On 6 June 2016, the Republic of Chile (“Chile”) instituted proceedings before the International Court of Justice against the Plurinational State of Bolivia (“Bolivia”) in relation to the status and use of the waters of the Silala. Chile invokes as a basis for jurisdiction the American Treaty on Pacific Settlement, the “Pact of Bogotá”, of 30 April 1948.¹
2. In its Order of 1 July 2016, the Court fixed 3 July 2017 for the filing of the Memorial of Chile. In response to the Memorial of Chile, Bolivia submits the present Counter-Memorial in accordance with the Order of the Court dated 23 May 2018 fixing 3 September 2018 as the time-limit for the filing of the present written pleading.

B. General Context

3. Bolivia is located in the center of South America and is part of one of the great hydrographic basins and sub-basins of the continent. This situation causes Bolivia to maintain relations of friendship, cooperation and integration with its five neighbors with which it shares water resources, in some cases as the upstream State and in others as the downstream State. As a result of this geographical condition, Bolivia has entered into diverse forms of cooperation agreements with its neighbors to achieve the sustainable use of water resources. Bolivia and Chile have not yet been able to conclude such agreements between them.

¹ Application instituting proceedings (hereinafter “Application”), 6 June 2016, p. 6, para. 5.

4. In June 2017, on the occasion of an important meeting of the United Nations Security Council dedicated to “Preventive Diplomacy and Transboundary Waters”, the United Nations Secretary-General noted that,

“With demand for freshwater projected to grow by more than 40 per cent by the middle of the century, and with climate change having a growing impact, water scarcity is a growing concern. (...) By 2050, at least one in four people will live in a country where the lack of fresh water is chronic or recurrent. Strains on water access are already rising in all regions. Without effective management of our water resources, we risk intensified disputes between communities and sectors and even increased tensions among nations.”²

5. The United Nations Secretary-General, Antonio Guterres, stressed that “it is essential that nations cooperate to ensure that water is shared equitably and used sustainably”, bearing in mind that “water has proven to be a catalyst for cooperation among nations, even those that are not on good terms.” For instance, “in South America, Lake Titicaca, the largest freshwater lake on the continent, has long been a source of cooperation between Bolivia and Peru.”³
6. At that meeting, the President of Bolivia, Evo Morales, stated that the “2030 Agenda for Sustainable Development has deepened our understanding of the need to achieve universal access to water and sanitation that is equitable for all.”⁴ The Bolivian Representative observed that in Bolivia many indigenous peoples live in rural areas and “our people have always considered water to be the source of life and a public good that belongs to everyone, not just to one set of people in

² United Nations, Security Council, 7959th meeting, 6 June 2017, S/PV.7959, p. 2.

³ United Nations, Security Council, 7959th meeting, 6 June 2017, S/PV.7959, p. 2.

⁴ United Nations, Security Council, 7959th meeting, 6 June 2017, S/PV.7959, p. 3.

particular. It is a nutrient that Mother Earth produces and should be respected and conserved.”⁵ He also pointed out that “water is vital to sustaining the life of all peoples and living beings and for maintaining balance on Mother Earth” and “must be conserved and safeguarded against pollution, the effects of climate change and overuse in activities that are not essential.”⁶ In addition, the President of Bolivia noted that “States should consider entering into governance agreements that emphasize the sustainability of transboundary water resources and provide for the establishment of institutional mechanisms that ensure the reasonable use of such resources.”⁷

7. The 2009 Constitution of Bolivia states that its natural resources are of strategic character and of public interest, recognizing water as a fundamental right for life within the framework of the sovereignty of the people and in harmony with Mother Earth.⁸ The State shall conserve, preserve, and guard these resources to guarantee priority use of water for life.⁹ Its water resources, whether surface or subterranean waters, constitute vulnerable and strategic finite resources. In relation to fossil, glacial, wetland, and subterranean waters, the State must guarantee their conservation, protection, preservation, restoration, sustainable use and complete management.¹⁰
8. The Bolivian Constitution also affirms that as a sovereign State “Bolivia is a pacifist State that promotes the culture of peace (...) as well as cooperation among the

⁵ United Nations, Security Council, 7959th meeting, 6 June 2017, S/PV.7959, p. 4.

⁶ United Nations, Security Council, 7959th meeting, 6 June 2017, S/PV.7959, pp. 4-5.

⁷ United Nations, Security Council, 7959th meeting, 6 June 2017, S/PV.7959, p. 5.

⁸ Arts. 348.II, 16.I, 373.I of the Constitution of the Plurinational State of Bolivia adopted on 7 February 2009, Official Gazette. Available at: https://www.constituteproject.org/constitution/Bolivia_2009.pdf

⁹ Art. 374.I of the Constitution of the Plurinational State of Bolivia adopted on 7 February 2009, Official Gazette. Available at: https://www.constituteproject.org/constitution/Bolivia_2009.pdf

¹⁰ Art. 374.III of the Constitution of the Plurinational State of Bolivia adopted on 7 February 2009, Official Gazette. Available at: https://www.constituteproject.org/constitution/Bolivia_2009.pdf

peoples of the region and the World, for the purpose of contributing to mutual understanding, equitable development, (...) with full respect for the sovereignty of States.”¹¹ In the conduct of its international relations, the Constitution expressly states as one of its guiding principles that of “[c]ooperation and solidarity among states and peoples.”¹²

C. Rejection of Chile’s Claims before the Court

9. In its Application, Chile indicates that the present dispute concerns “the nature of the Silala River system as an international watercourse and Chile’s rights as a riparian State”¹³ and that it is “seeking declarations concerning the nature of the Silala River system as an international watercourse and resulting rights and obligations of the Parties under international law.”¹⁴ According to Chile’s Memorial,

“Chile asks the Court to declare that Chile is entitled to the equitable and reasonable use of the waters of the Silala River and, in addition, to declare that – pursuant to the standard of equitable and reasonable utilization – Chile is entitled to its current use. The dispute also concerns the obligations of Bolivia that arise by virtue of the status of the Silala River system as an international watercourse.”¹⁵

10. Bolivia in the present Counter-Memorial will demonstrate that Chile’s case is based on both a mischaracterization and an over-simplification of the real nature of the Silala waters and springs. Chile alleges that they constitute in their entirety an

¹¹ Art. 10.I of the Constitution of the Plurinational State of Bolivia adopted on 7 February 2009, Official Gazette. Available at: https://www.constituteproject.org/constitution/Bolivia_2009.pdf

¹² Art. 255.II.5 of the Constitution of the Plurinational State of Bolivia adopted on 7 February 2009, Official Gazette. Available at: https://www.constituteproject.org/constitution/Bolivia_2009.pdf

¹³ Application, p. 20, para. 41.

¹⁴ Application, p. 4.

¹⁵ Memorial of Chile (hereinafter “CM”), p. 3, para. 1.5.

international watercourse. In doing so, Chile disregards that these waters, which largely originate from springs located in Bolivia's territory, have been artificially drained and channelized in order to generate their present, man-made rate and volume of flow. Chile fails to take into account the complexity and specific nature of the waters of the Silala as well as the impact of that nature on the rules which are applicable to these waters under customary international law.

11. Bolivia will also explain that the determination of the nature of the waters of the Silala depends on technical and scientific assessments conducted in relation to the relevant definitions and understandings of what constitutes an international watercourse under customary international law.¹⁶
12. The relevant scientific studies, in particular the experts' reports submitted by Bolivia and Chile, show evidence of artificial enhancements leading to the conclusion that the waters of the Silala are part of an *artificially enhanced watercourse*.
13. A recent study by the Danish Hydraulic Institute (hereinafter "DHI") commissioned by Bolivia indicates in particular that current surface flows across the Bolivian-Chilean frontier have been assessed to average 160-210 liters per second (l/s). Of this flow, it is estimated that 30-40%, or as much as 64-84 l/s, can be directly attributed to enhancements created by the artificial channels and drainage mechanisms installed in the Silala within Bolivia.¹⁷
14. Given that under customary international law an international watercourse designates the transboundary *natural* flow of waters, customary international rules

¹⁶ Bolivian Counter-Memorial (hereinafter "BCM"), para. 24.

¹⁷ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 16 July 2018, p. 41, **BCM, Vol. 2, Annex 17**.

on the use of international watercourses do not apply to the *artificially*-flowing Silala waters.¹⁸

15. In the Memorial, Chile adds that it “is entitled to the equitable and reasonable utilization of the waters of the Silala River system in accordance with customary international law” and that “under the standard of equitable and reasonable utilization, Chile is entitled to its current use of the waters of the Silala River”.¹⁹
16. Concerning the equitable and reasonable utilization of the Silala waters, Bolivia submits that Chile’s claims should be dismissed. Not only do they seek to indiscriminately apply to *all* Silala waters rather than *only* those flowing naturally, they also fail to take into account Bolivia’s rights in relation to those waters. The current use of the naturally-flowing Silala waters by Chile is without prejudice to Bolivia’s concurrent right to their equitable and reasonable use.²⁰
17. Further, Chile claims that under customary international law on international watercourses, “Bolivia has an obligation to take all appropriate measures to prevent and control pollution and other forms of harm to Chile resulting from its activities in the vicinity of the Silala River”²¹ and that “Bolivia has an obligation to cooperate to provide Chile with timely notification of planned measures which may have an adverse effect on shared water resources, to exchange data and information and to conduct where appropriate an environmental impact assessment.”²²

¹⁸ BCM, paras. 80-108.

¹⁹ CM, p. 107, Submissions b) and c).

²⁰ In the Memorial, Chile admits that it has “obligations owed to Bolivia” (CM, p. 92, para. 5.3), and that its claims are without prejudice to “any future use by Bolivia of the Silala River” (CM, p. 2, para. 1.3 d) and p. 106, para. 6.5). However, Chile’s submissions do not make any reference to Bolivia’s rights.

²¹ CM, p. 107, Submission d).

²² CM, p. 107, Submission e).

18. These claims should also be dismissed. Bolivia instead asks the Court to declare that Bolivia and Chile each have an obligation to take all appropriate measures to prevent the causing of significant transboundary environmental harm, and that each have an obligation to cooperate and to provide the other State with timely notification of planned measures which may have a significant adverse effect on naturally-flowing Silala waters, and to exchange data and information and where appropriate, to conduct environmental impact assessments.
19. Contrary to Chile's allegation that Bolivia has breached "its obligation to notify and consult Chile with respect to activities that may affect the waters of the Silala River or the utilization thereof by Chile,"²³ Bolivia will demonstrate Chile's failure to credibly prove such claim.

D. Bolivia's Counter-Claims

20. Bolivia, in accordance with Article 80 of the Rules of Court, is submitting three Counter-Claims in this Counter-Memorial that are directly connected with the subject-matter of the claims of Chile and that come within the jurisdiction of the Court. Bolivia's Counter-Claims are: (i) Bolivia has sovereignty over the artificial channels and drainage mechanisms in the Silala that are located in its territory and has the right to decide whether and how to maintain them; (ii) Bolivia has sovereignty over the artificial flow of Silala waters engineered, enhanced, or produced in its territory and Chile has no right to any part of that artificial flow; and (iii) any delivery from Bolivia to Chile of artificially-flowing waters of the Silala, and the conditions and modalities thereof, including the compensation to be paid for said delivery, are subject to the conclusion of an agreement with Bolivia.

²³ CM, p. 107, Submission e).

21. Bolivia also notes that its submissions are without prejudice to any other claim that Bolivia may formulate in relation to past use of the Silala waters by Chile.

E. Structure of the Counter-Memorial

22. This Counter-Memorial consists of a Volume 1 divided into six chapters with annexes in the accompanying 4 Volumes.
23. Following this introductory chapter, Chapter 2 presents the relevant facts as regards the nature of the waters of the Silala. Chapter 3 characterizes the Silala waters under the relevant rules of international law. Chapter 4 defines the legal consequences of the status of the Silala as an *artificially*-enhanced watercourse under customary international law. Chapter 5 shows that Bolivia did not breach the obligation to notify and consult Chile concerning activities that may significantly affect the naturally-flowing Silala waters. Chapter 6 presents Bolivia's Counter-Claims. The Counter-Memorial concludes with Bolivia's Submissions to the Court.

CHAPTER 2

FACTUAL BACKGROUND OF THE SILALA WATERS

24. The determination of whether certain waters constitute an international watercourse under international law depends on their “geographical characteristics” and other “physical factors.”²⁴ It is thus necessary to define the physical nature of the Silala waters to identify the rules that are applicable to them.

A. Joint Efforts to Identify the Nature of the Silala Waters and Reach an Agreement on its Utilization

25. Chile’s Memorial relies on inaccurate interpretations of Bolivian cartography, minutes, and statements regarding the Silala waters. Bolivia cannot accept these characterizations. At the time these documents were produced, both States lacked sufficient scientific evidence to accurately determine the nature of the Silala waters. Therefore, Bolivia will emphasize the more recent efforts by the Parties to ascertain the nature of the waters in question.
26. The efforts by Bolivia and Chile to identify the exact nature of the Silala waters are part of a continuing process, which started before the present proceedings. As Chile itself acknowledges in its Memorial, the exact nature of these waters has been an issue between both countries since 1999.²⁵

²⁴ *Yearbook of the International Law Commission*, 1994, Volume II, Part 2, p. 90, paras. 2-3 of the commentary on Draft Article 2. On the definition of international watercourses under customary international law, BCM, paras. 93-102.

²⁵ CM, p. 40, paras. 3.8 ff. For those diplomatic exchanges between the Parties which started in 1999 see CM, Vol. II, Annexes 27 ff.

27. In September 1999, following a Note Verbale from Chile asserting that the Silala is “an international river of a successive course, the use of which is governed by International Law,”²⁶ Bolivia replied that the waters of the Silala springs, from which the surface flow emerges, as creating “wetlands, from where the waters are caught and conducted by means of artificial work, generating a system that lacks any characteristic of a river, let alone of an international river of a successive course.”²⁷ In response, Chile asserted that the waters of the Silala constitute “a binational river or a shared river (...) that naturally responds to the definition that international law gives for that purpose”.²⁸
28. This divergence of views led Bolivia and Chile to initiate, in Chile’s own words, a “collaborative relationship” that resulted in the establishment of a “joint technical commission” in 2000.²⁹ Discussions continued in 2004 “within the framework of the Working Group on the Silala Issue” during which, “[a]gain, both States agreed to carry out joint technical and scientific studies to determine the nature, origin and flow of the waters of the Silala”.³⁰
29. In March 2004, the Ministers of Foreign Affairs of the two countries agreed to establish a Joint Technical Commission to exchange their views on the Silala. The

²⁶ Note N° 474/71 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 20 May 1999, **CM, Vol. 2, Annex 26**.

²⁷ Note N° GMI-656/99 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 3 September 1999, **CM, Vol. 2, Annex 27**.

²⁸ Note N° 017550 from the Ministry of Foreign Affairs of Chile to the Ministry of Foreign Affairs of Bolivia, 15 September 1999, **CM, Vol. 2, Annex 28**.

²⁹ CM, p. 43, paras. 3.16 ff.

³⁰ CM, pp. 45-46, para. 3.22. See also pp. 43-44, paras. 3.17-3.18 with regard to the work done in 2000 and 2001.

first meeting of this Commission took place in May 2004.³¹ On that occasion, the Parties:

“(…) agreed on *the need to conduct technical and scientific studies that allow determining the nature, origin, and flows of the Silala waters*, in order to thus establish a scientific basis that shall be made available to their respective governments. Additionally, the Delegations informed each other about the conclusions reached by their respective preliminary studies to date.

Furthermore, both Delegations agreed that technical organisations from both countries should conduct as of now joint studies in the Silala area regarding the following aspects:

1. Topography, geodesics, and cartography, to be executed by the corresponding Directorates of Boundaries
2. Geological analysis
3. Geomorphological analysis
4. Hydrological analysis
5. Hydraulic evaluation of existing works
6. Geophysical and hydrogeological explorations.”³²

30. Both delegations also agreed that:

“the technical and scientific studies would be aimed at determining the nature of the waters of the Silala and its flows. It is expected that these studies shall issue conclusions on the following aspects:

1. Origin of the water resources of the Silala
2. Impact of the hydraulic works executed therein
3. Determination of the flows and volumes of the surface and underground waters of the Silala

³¹ Minutes of the First Meeting of the Bolivia-Chile Working Group on the Silala Issue, 6 May 2004, **CM, Vol. 2, Annex 21**.

³² Minutes of the First Meeting of the Bolivia-Chile Working Group on the Silala Issue, 6 May 2004 (emphasis added), **CM, Vol. 2, Annex 21**. See also Press Release from the Ministry of Foreign Affairs of Bolivia, 1 October 2010, **CM, Vol. 3, Annex 52**.

4. Potential of the water resources of the Silala
5. Environmental impact
6. Water balance
7. Recharge and discharge volumes
8. Flow direction and velocity
9. Relation between surface and underground waters
10. Recharge and discharge areas of the Silala aquifer.”³³

31. At the same meeting,

“The Chilean Delegation (...) expressed that the nature of the waters would be determined by the pertinent studies, the study that the IAEA could undertake being a good alternative to support the agreed studies. This, without detriment to the possibility of resorting to other trustworthy organisations such as the UNESCO, or other entities of a good reputation, to achieve the set objectives.

Both Delegations agreed that the technical and scientific study should be titled ‘The Nature and Characteristics of the Water Resources of the Silala’, and that the study would be coordinated by the Foreign Ministries of both nations”.³⁴

32. In August of 2004, Chile proposed a joint study profile to explore the nature and characteristics of the Silala water resources, including the impact of the hydraulic infrastructure on water flow in the Silala.³⁵ Based on that understanding, in January 2005 the Parties reiterated their commitment to move forward “in a joint work program that will include technical-scientific studies on both sides of the border necessary to determine the nature, origin and flows of the waters of Silala, both on

³³ Minutes of the First Meeting of the Bolivia-Chile Working Group on the Silala Issue, 6 May 2004, **CM, Vol. 2, Annex 21.**

³⁴ Minutes of the First Meeting of the Bolivia-Chile Working Group on the Silala Issue, 6 May 2004, **CM, Vol. 2, Annex 21.**

³⁵ Joint Study Profile submitted by Chile in August of 2004, pp. 20 ff, **BCM, Vol. 2, Annex 4.**

the surface and underground.”³⁶ This approach was again pursued in July 2006 with the objective of reaching a final, practical and satisfactory solution for both Parties in the form of a Preliminary Agreement on the issue of the use of the Silala waters.³⁷

33. To that end, on 10 June 2008, the Parties determined to work towards “[o]n the one hand, deepening the joint and coordinated study of the technical aspects and, on the other hand, seeking an immediate basic agreement on the topics on which there is consensus.”³⁸ They also “agreed to formulate and implement a joint scheme of work in the Silala area, to determine the water balance, hydrometric behaviour, water dating, surface flows, influence of the waterworks on the streamflow, among other, using a scientifically valid and agreed methodology.”³⁹
34. A week later, on 17 June 2008, the Parties agreed “that in the next 60 days, the contents will be exchanged for an immediate basic agreement, that takes into account the water resource in its existing uses, the rights of each country, and the means and mechanisms for its use in order to generate economic benefits for Bolivia, considering the sustainability of the resource.”⁴⁰
35. Later that year, on 14 November 2008, both countries met again to consider developing a provisional agreement regarding the utilization of the waters that would serve as basis for a definite agreement by which the Parties were to determine

³⁶ Minutes of the II Meeting of the Bolivia-Chile Working Group on the Silala Issue, 20 January 2005, **BCM, Vol. 2, Annex 5.**

³⁷ Minutes of the Second Meeting of the Bolivia-Chile Working Group on Bilateral Affairs, 17 July 2006, **CM, Vol. 2, Annex 22.**

³⁸ Minutes of the Third Meeting of the Bolivia-Chile Working Group on the Silala Issue, 10 June 2008, **CM, Vol. 2, Annex 23.**

³⁹ Minutes of the Third Meeting of the Bolivia-Chile Working Group on the Silala Issue, 10 June 2008. **CM, Vol. 2, Annex 23.**

⁴⁰ Minutes of the XVIII Meeting of the Bolivia-Chile Political Consultation Mechanism, 17 June 2008, **BCM, Vol. 2, Annex 6.**

the percentages of waters freely available to each of the Parties, agreeing that: “[t]he waters that are freely available in Bolivia and that were not used in that country, may be made available for use in Chile, for which a mechanism must be agreed upon that allows the constitution of exploitation rights in the border, as well as the value that corresponds for its exclusive use.”⁴¹

36. On 28 July 2009, Bolivia and Chile reached a consensus on the text of an “Initial Agreement” on the Silala⁴² in which they provisionally agreed, in particular: (a) the use of the Silala waters that are freely available to Bolivia, abstracted in its territory and transported to Chile should be compensated to Bolivia by the Chilean legal entities⁴³; (b) a percentage (50%) of the surface waters of the Silala correspond to Bolivia and are freely available to this country, this percentage may be increased on the basis of future joint studies⁴⁴; (c) the Parties shall determine the influence of waterworks on the flow before reaching a final agreement⁴⁵; (d) Bolivia shall give its authorization for the waters of Silala that are freely available to it to be used in Chilean territory, and any dispute that may arise between the legal Chilean entity and Bolivia shall be resolved in accordance with Bolivian rules and before Bolivian authorities.⁴⁶
37. In that Initial Agreement, the Parties also made clear that further studies on the nature of the “hydric system of the Silala” were expected and needed, and would be undertaken jointly “in order to achieve a better understanding of its functioning and nature”⁴⁷. Finally, in the fourth paragraph of its preamble, the Parties determined

⁴¹ Minutes of the IV Meeting of the Bolivia-Chile Working Group on the Silala Issue, 14 November 2008, **BCM, Vol. 2, Annex 7.**

⁴² Initial Agreement [Silala or Siloli], Agreed Draft, 28 July 2009, **BCM, Vol. 2, Annex 8.**

⁴³ Initial Agreement [Silala or Siloli], Agreed Draft, 28 July 2009, Art 3. **BCM, Vol. 2, Annex 8.**

⁴⁴ Initial Agreement [Silala or Siloli], Agreed Draft, 28 July 2009, Art 6. **BCM, Vol. 2, Annex 8.**

⁴⁵ Initial Agreement [Silala or Siloli], Agreed Draft, 28 July 2009, Art 9. **BCM, Vol. 2, Annex 8.**

⁴⁶ Initial Agreement [Silala or Siloli], Agreed Draft, 28 July 2009, Art 15. **BCM, Vol. 2, Annex 8.**

⁴⁷ Initial Agreement [Silala or Siloli], Agreed Draft, 28 July 2009, Art 5. **BCM, Vol. 2, Annex 8.**

that any other issue related to the Silala would be addressed in the future agreement.⁴⁸

38. In November 2009, the Bolivia-Chile Working Group on the Silala issue modified the Initial Agreement and prepared a second draft, in which both Parties left open “other issues that each of the parties might have an interest in addressing when negotiating the new long-term Agreement”⁴⁹ regarding the Silala, and decided, among others, to conduct joint studies to define the nature of the Silala water system.
39. The draft agreement could not be finalized and concluded. In accordance with the fourth preamble of the Initial Agreement, in July 2010 Bolivia raised the aspect of compensation that Chile would pay to Bolivia for past use of Silala waters.⁵⁰ The Parties determined that the Silala Working Group should be informed of, analyze, and respond to all the proposals arising from the process of dissemination of the Initial Agreement and submit a report to the Political Consultation Mechanism.⁵¹ The meeting of this Working Group was held in October 2010. Bolivia suggested that the Agreement should incorporate a transitory article allowing the negotiations on compensation for Chile’s past use of Silala waters. Chile refused to sign the minutes of the meeting⁵² and did not convene the Third Meeting of the Political

⁴⁸ Initial Agreement [Silala or Siloli], Agreed Draft, 28 July 2009, preamble, para. 4. **BCM, Vol. 2, Annex 8.**

⁴⁹ Initial Agreement [Silala or Siloli], Agreed Draft, Santiago, 13 November 2009, **BCM, Vol. 2, Annex 9.**

⁵⁰ La Razón, “*Everything will be done after signing the Initial Agreement*”, La Paz, 30 August 2009, **BCM, Vol. 2, Annex 16.**

⁵¹ Minutes of the Twenty-Second Meeting of the Bolivia-Chile Political Consultation Mechanism, 14 July 2010, **CM, Vol. 2, Annex 24.**

⁵² Minutes of the First Part of the VIII Meeting of the Bolivia-Chile Working Group on the Silala Issue, 1 October 2010. **BCM, Vol. 2, Annex 8.**

Consultation Mechanism, despite previous agreement to hold this meeting in November 2010.

40. Bolivia then invited Chile to hold a meeting of the Working Group on 12 September 2011 in La Paz.⁵³ That invitation was not answered by Chile. Another invitation sent in May 2012,⁵⁴ which proposed a joint technical visit to Silala, was also ignored.

B. State of Knowledge of the Silala

41. The Silala constitutes a complex system of channelized surface and subsurface water resources that traverse the Bolivian-Chilean border. Based on the above account, it is evident that, in order to settle the dispute concerning the nature and use of the Silala and to define their respective rights and obligations, the Parties have considered it necessary and have been attempting for many years to improve their knowledge of the nature of the Silala waters and to determine the influence of the artificial installations.
42. The experts' reports submitted by both Parties in the present proceedings certainly have helped to further improve understanding of the Silala, on which the identification of the rules applicable to it under international law depends. Based on these reports, what is known today about the Silala waters and the impact of artificial installations on their flow confirms to a large extent, as this Chapter will

⁵³ Note N° VRE-DGRB-UAM-018880/2011 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 29 August 2011. **BCM, Vol. 2, Annex 11.**

⁵⁴ Note N° VRE-DGRB-UAM-009901/2012 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 24 May 2012. **BCM, Vol. 2, Annex 12.**

show, Bolivia's position according to which the Silala constitutes an artificially-enhanced watercourse.⁵⁵

43. The Silala is located in the high altitude Altiplano, a dry *puna* mountain zone, adjacent to the highly arid Atacama Desert. The region is characterized by low precipitation, low temperatures, and high potential evaporation⁵⁶. The Silala topographical catchment of an approximate area in Bolivia of 59.1 km² is dominated by groundwater flows that generate negligible surface runoff⁵⁷ (**Figure 1**).

⁵⁵ Bolivia does not consider it necessary to respond to all the hydrological, hydrogeological, topographic, ecological and other characterizations of the Silala that Chile included in its Memorial. Bolivia will only address those that are relevant for the understanding and identification of the nature of the Silala under international law.

⁵⁶ Recent studies carried out in Bolivia have determined that the annual rainfall in the Silala is significantly low and reaches an approximate average of 125 mm/year. The average annual temperature is 2.2° C and the annual potential evapotranspiration is of approximately 1472 mm/year. See Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 14. **BCM, Vol. 2, Annex 17**. See also Annex B: Climate Analysis, in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, pp. 17-18, 21. **BCM, Vol. 2, Annex 17**.

⁵⁷ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, p. 25. **BCM, Vol. 2, Annex 17**. See also Annex A: The Silala Catchment in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p.10. **BCM, Vol. 2, Annex 17**.

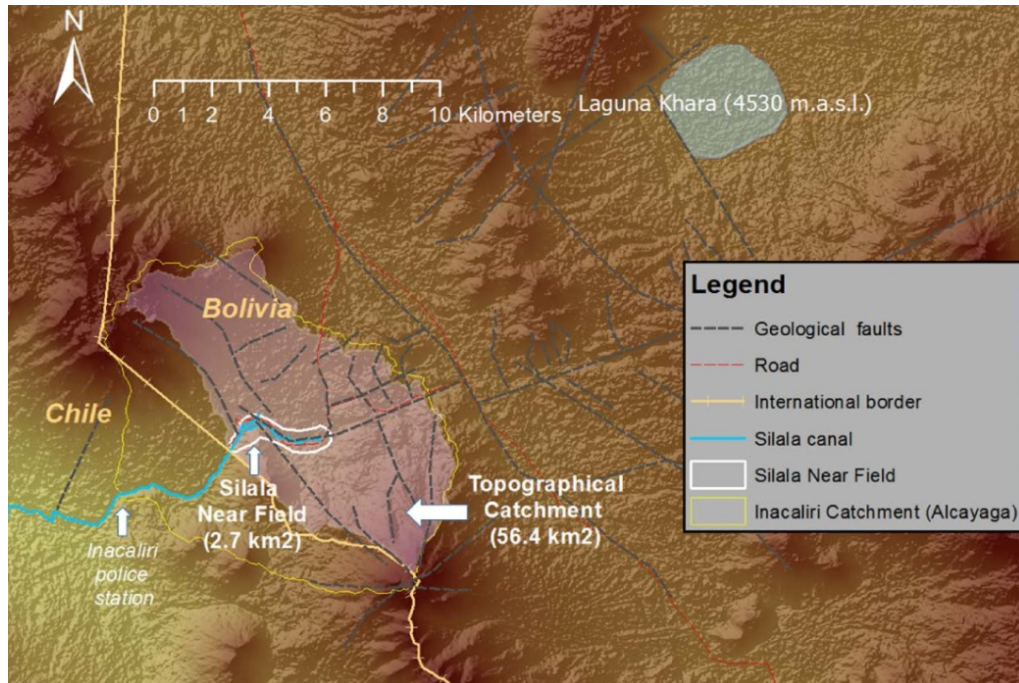


Figure 1: Topographical catchment of the Silala in Bolivia (Source: Annex A, in DHI, Final Report, p. 11)

44. In Bolivian territory, the Silala Ravine was formed by fluvio-glacial erosion, presenting a “U” shaped profile⁵⁸ (**Figure 2**). It crosses the border between Chile and Bolivia about 4 km downstream from the South Bofedal at an altitude of 150 m, which is lower when compared to the upper springs⁵⁹ and equivalent to an approximate gradient of 3.7%. The topography and geology of the Altiplano are dominated by volcanoes and thick deposits of pyroclastic material known as ignimbrites. Due to both climate and altitude, the vegetation is characterized by sparse and scattered grasses on the plains and volcano slopes.⁶⁰

⁵⁸ Ramsar Convention Secretariat, *Report Ramsar Advisory Mission N° 84, Ramsar Site Los Lipez, Bolivia*, 2018, p. 16. **BCM, Vol. 5, Annex 18.**

⁵⁹ Annex A: The Silala Catchment, in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 6. **BCM, Vol. 2, Annex 17.**

⁶⁰ Appendix A2: Final Report, Annex D: Soil Analyses, p. 3, p. 19 in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018. **BCM, Vol. 3, Annex 17.**



Figure 2: “U” shaped profile of the Main Ravine of the Silala in Bolivia
(Source: DIREMAR, 2018)

45. The wetlands found in the Silala catchment area within Bolivia are located at an elevation of more than 4.320 meters above sea level. They are described as cushion bogs, known as *bofedales* in the Andean region, with peat layers formed from decaying *Distichia* plants (**Figure 3**). With time, these wetlands build peat layers of organic deposits that can be several meters deep.⁶¹ The *bofedales* have been described by researchers as “peatlands (...) like no other in the world”, and as “unique, extremely fragile water features sensitive to climate changes and human disturbances.”⁶² In their natural state, the *bofedales* “are indicative of elevated groundwater tables and a permanently inundated valley floor.”⁶³

⁶¹ G. Skrzypek, Z. Engel, T. Chuman, L. Šefrna, “Distichia Peat — A New Stable Isotope Paleoclimate Proxy for the Andes”, *Earth and Planetary Science Letters*, 2011, Vol. 307, pp. 298-308.

⁶² A. F Squeo, G. B. Warner, R. Aravena, D. Espinoza, “Bofedales: High Altitude Peatlands of the Central Andes”, *Revista Chilena de Historia Natural*, 2006, Vol. 79, at p. 245.

⁶³ C. Latorre and M. Frugone, *Holocene Sedimentary History of the Río Silala (Antofagasta Region, Chile)*, 2017, **CM, Vol. 5, Annex IV.**

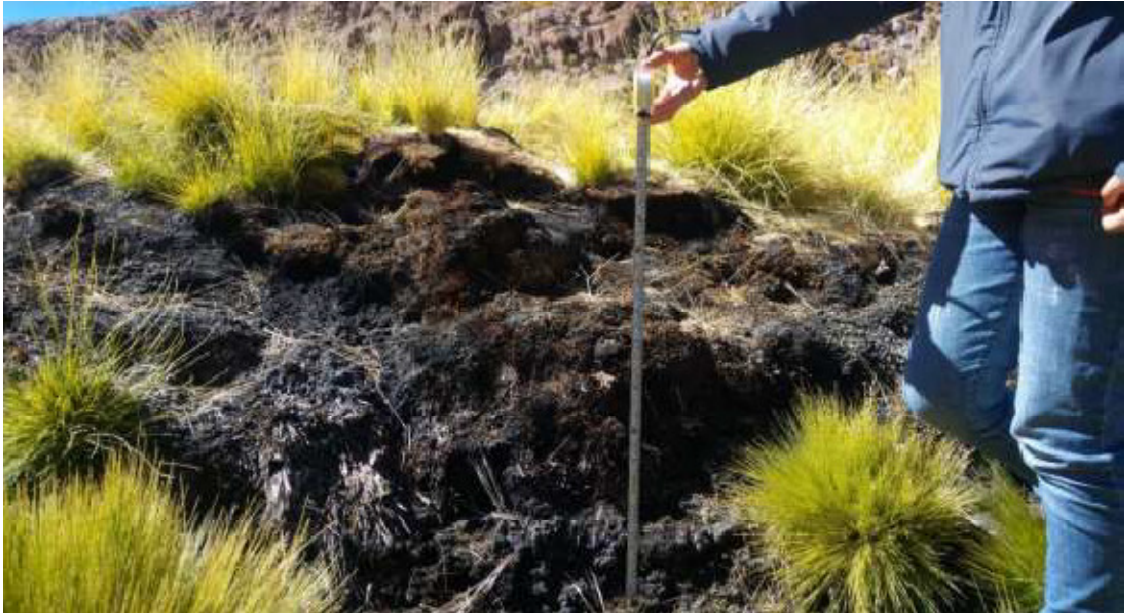


Figure 3: An excavated section and vertical peat profile at the edge of an undisturbed wetland patch in the North Bofedal (Source: Annex C, in DHI, Final Report, p. 17)

46. These wetlands are vulnerable to changing climatic and other conditions and rely on a long-term, steady and reliable water supply to maintain suitable hydrological conditions. In the Silala catchment area within Bolivia, *bofedales* are found in both the South Ravine (Orientales) (**Figure 4**) and North Ravine (Cajones) (**Figure 5**), which are controlled by the topography and groundwater discharges emerging primarily from springs.⁶⁴

⁶⁴ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 12. **BCM, Vol. 2, Annex 17.**

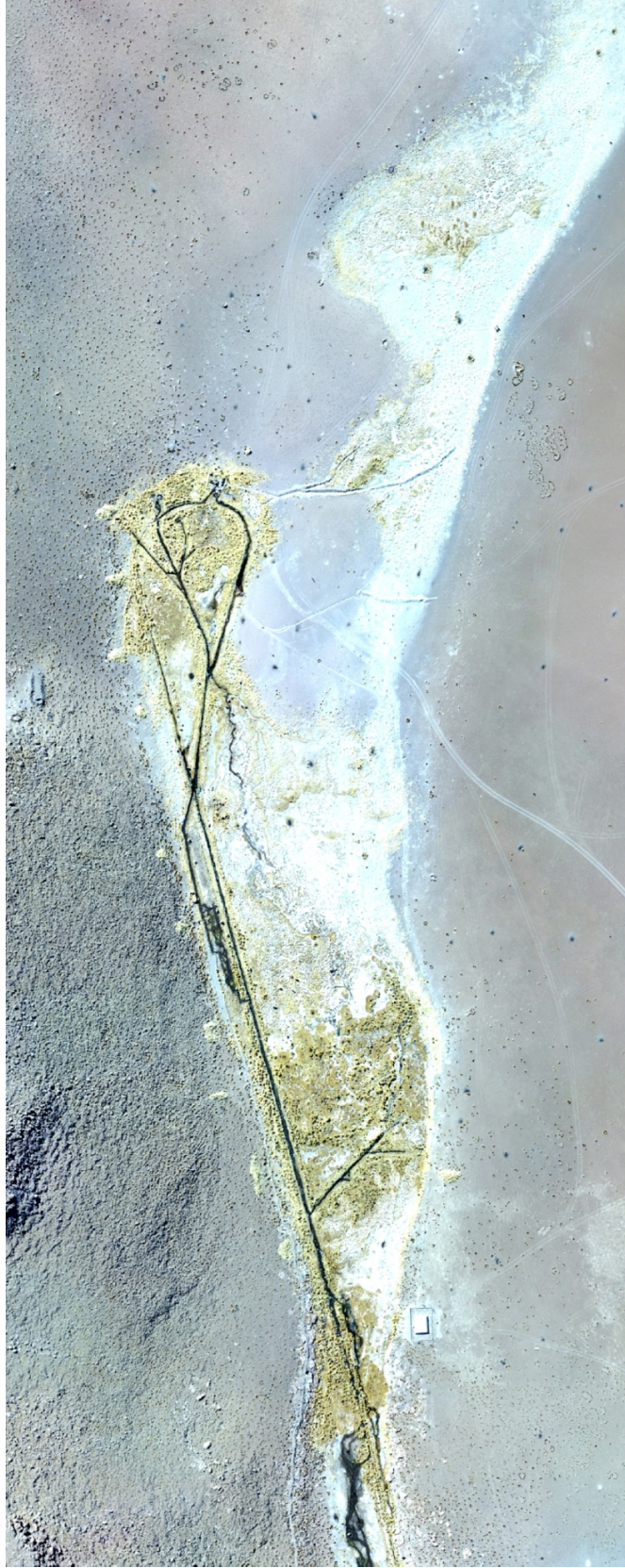


Figure 4: South Bofedal in Bolivia (Source: DIREMAR, 2017)



Figure 5: North Bofedal in Bolivia (Source: DIREMAR, 2017)

47. The Silala is a groundwater-fed water resource where contributions from surface catchment runoff are small in comparison to the stationary or slowly varying groundwater flow contributions. The potential area that stores and supplies groundwater to the Silala comes from a hydrological catchment of approximately 234.2 km² located in the Silala area⁶⁵ (**Figure 6**). These waters have an approximate age between 1,000 to 11,000 years,⁶⁶ and it has not been ruled out that these waters are non-renewable fossil groundwater.⁶⁷ Water on the surface and in the subsurface generally flows in a westward direction.⁶⁸ Currently, water flows through an artificially enhanced channel across the border from Bolivia into Chile at a variable flow rate of approximately 160-210 l/s.⁶⁹ The water flow in the subsurface of the Silala catchment area is believed to have a rate of 100 l/s.⁷⁰

C. Artificial Enhancement of the Silala

48. In 1908, *The Antofagasta (Chili) and Bolivia Railway Company Limited* (‘the Railway Company’), a Chilean owned private company incorporated in the United Kingdom, secured a concession from the Department of Potosi Prefecture in

⁶⁵ Annex A: The Silala Catchment in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 12. **BCM, Vol. 2, Annex 17.**

⁶⁶ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 2. **BCM, Vol. 2, Annex 17.**

⁶⁷ Appendix A2: Final Report, Annex D: Soil Analyses in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 85. **BCM, Vol. 3, Annex 17.**

⁶⁸ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 28. **BCM, Vol. 2, Annex 17.**

⁶⁹ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 26 and p. 41. **BCM, Vol. 2, Annex 17.**

⁷⁰ “The model results of the Near Field suggest the present cross border groundwater flows over a 450m wide section around the ravine to be in the order of 100 l/s” in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 41. **BCM, Vol. 2, Annex 17.**

Bolivia.⁷¹ In order to implement their concession, in 1910 the Railway Company built a desiltation chamber (**Figure 7**) and installed a 56 km⁷² pipeline to convey an approximate water flow of 76 l/s⁷³ from the confluence of the North and South Ravines in Bolivia to the San Pedro station in Chile.⁷⁴

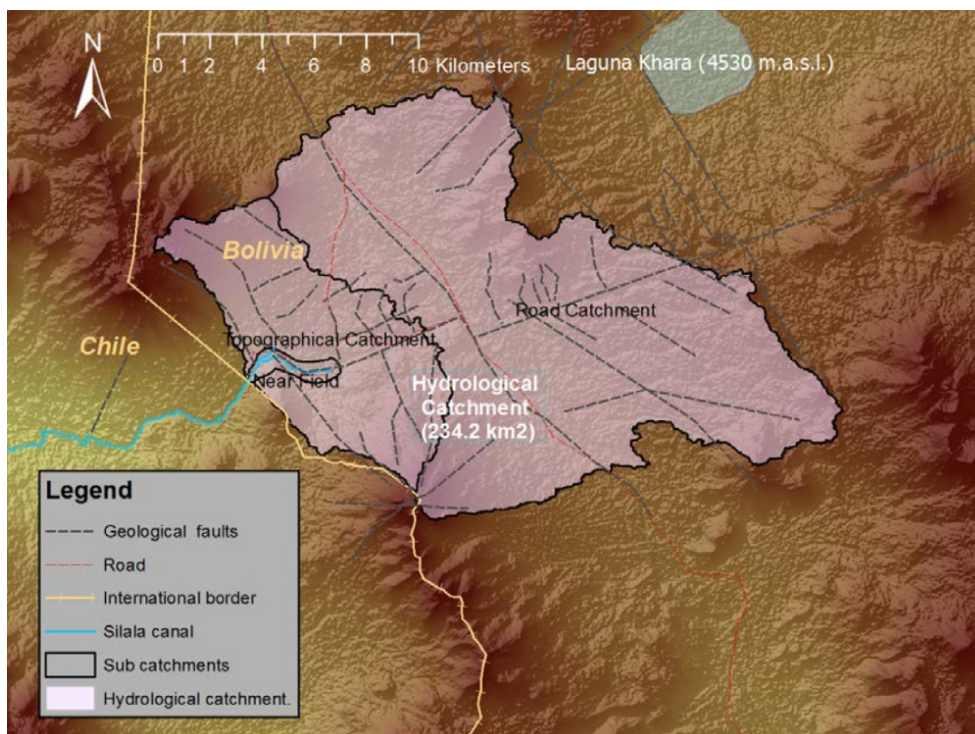


Figure 6: Hydrological catchment of the Silala in Bolivia (Source: Annex A, in DHI, Final Report, p. 12)

⁷¹ Deed of Concession by the State of Bolivia of the Waters of the Siloli (N° 48) to The Antofagasta (Chili) and Bolivia Railway Company Limited, 28 October 1908. **CM, Vol. 3, Annex 41.**

⁷² Robert H. Fox, “The Waterworks Department of the Antofagasta (Chili) & Bolivia Railway Company”, *South African Journal of Science*, 1922, p. 124. **CM, Vol. 3, Annex 75.**

⁷³ A discharge of 6.600 m³ per day, equivalent to 76 l/s approximately, has been registered. See: Robert H. Fox, “The Waterworks Department of the Antofagasta (Chili) & Bolivia Railway Company”, *South African Journal of Science*, 1922, p. 124. **CM, Vol. 3, Annex 75.**

⁷⁴ See also Robert H. Fox, “The Waterworks Department of the Antofagasta (Chili) & Bolivia Railway Company”, *South African Journal of Science*, 1922, p. 124. **CM, Vol. 3, Annex 75.**

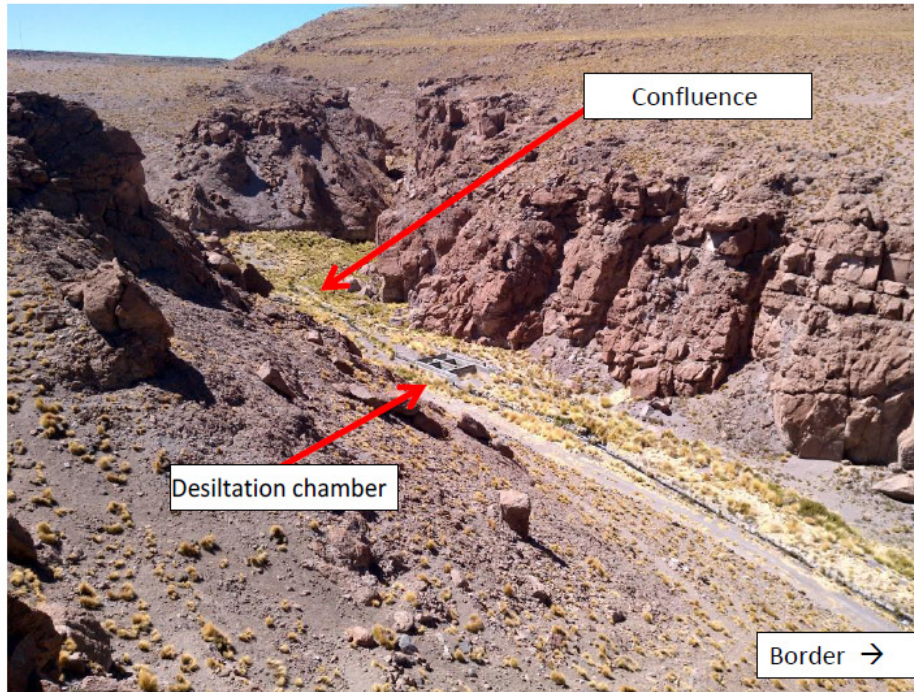


Figure 7: The Main Channel and desiltation chamber just below the confluence of the secondary channels emerging from the North (Cajones) Ravine on the left, and the South (Orientales) Ravine on the right (Source: DIREMAR, 2018)

49. In the 1920s, the Railway Company began to channelize the Silala waters by installing engineered infrastructure in the headwaters of the Bolivian *bofedales* and digging earthen channels from the upper springs of the two ravines to the border with Chile in order to artificially draw the water from the surrounding springs and *bofedales* and convey it more efficiently across the border into Chile.⁷⁵
50. The artificial infrastructure includes a Main Channel that begins in Bolivia at the confluence of the two Silala ravines the North and South Ravines (**Figures 8 and 9**) and crosses the border into Chile. The Main Channel is connected to two subsidiary main channels constructed in each of the two ravines and a desiltation chamber located 700 m from the border inside Bolivian territory. Within the two ravines, the

⁷⁵ Muñoz, J. F., Suárez, F., Fernández, B., Maass, T., 2017. *Hydrology of the Silala River Basin*, pp. 16-23. CM, Vol. 5, Annex VII.

two subsidiary main channels are connected to several artificial minor lateral channels and drainage mechanisms that crisscross throughout the *bofedales*. These lateral channels and drainage mechanisms are directly connected to each of the more than one hundred Silala springs and guide the spring flows to the subsidiary main channels in each of the two ravines, thereby bypassing most of the *bofedal* habitat (**Figures 10 and 11**).



Figure 8: The technical stonework of the Main Channel as it receives water transported by the two main subsidiary channels emerging from the North (Cajones) Ravine and South (Orientales) Ravine (Source: DIREMAR, 2018).



Figure 9: The Main Channel before it reaches the border (Source: DIREMAR, 2018)

51. The main artificial channels of the Silala vary in depth and width.⁷⁶ There are also second and third level channels that were dug out by hand to develop an extensive drainage network that could reach the full extent of the *bofedales*. In all, the Railway Company installed approximately 6.600 meters of channels, pipes, and lined ditches,⁷⁷ in Bolivia's Silala basin that artificially enhanced the flow of water to Chile (**Figures 12, 13 and 14**).

⁷⁶ Annex G: Integrated Surface Water – Groundwater Modelling, in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, pp. 24-27. **BCM, Vol. 5, Annex 17.**

⁷⁷ Annex G: Integrated Surface Water – Groundwater Modelling, in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 24. **BCM, Vol. 5, Annex 17.**

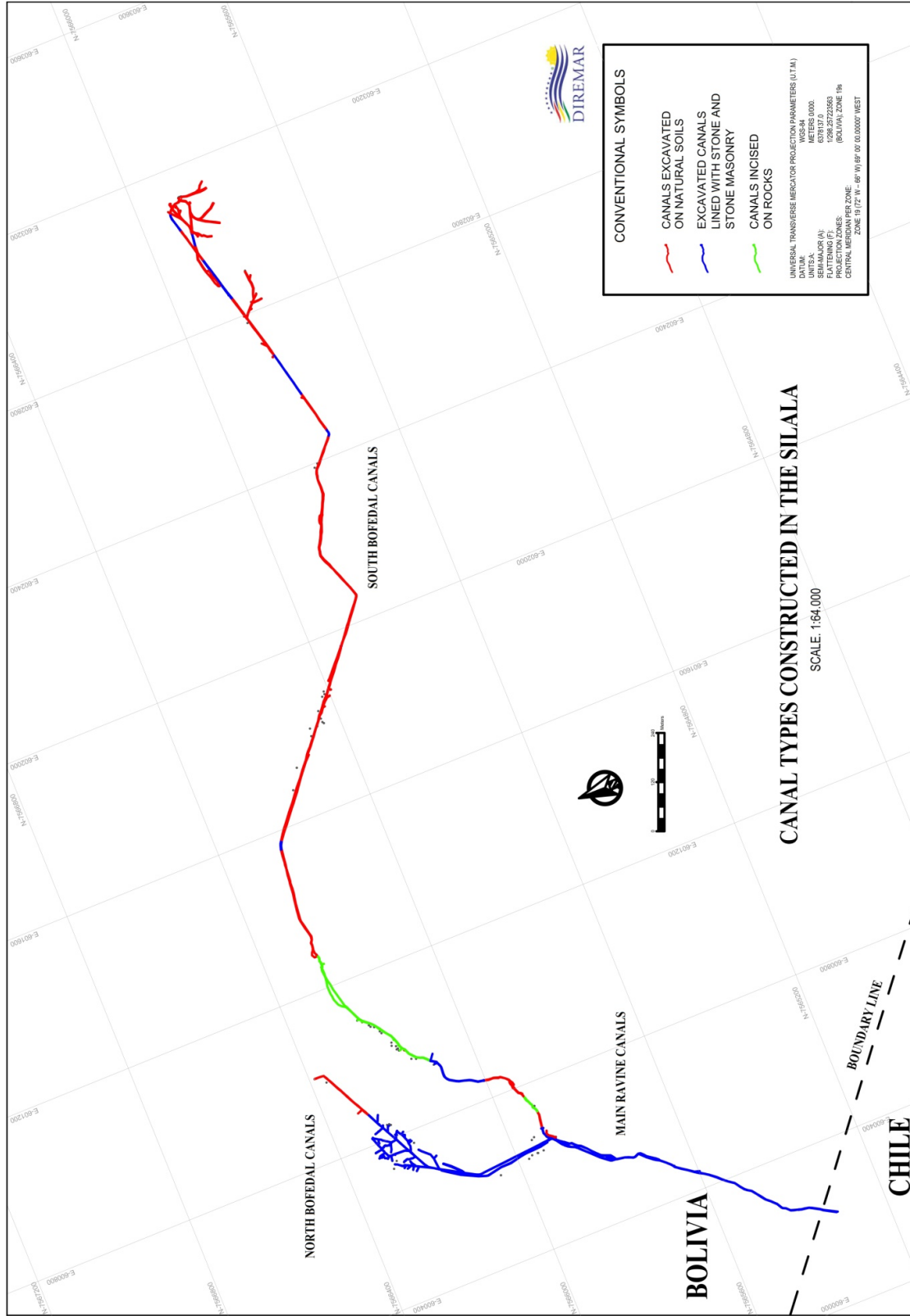


Figure 10: Canal types constructed in the Silala (Source: DIREMAR, 2018)

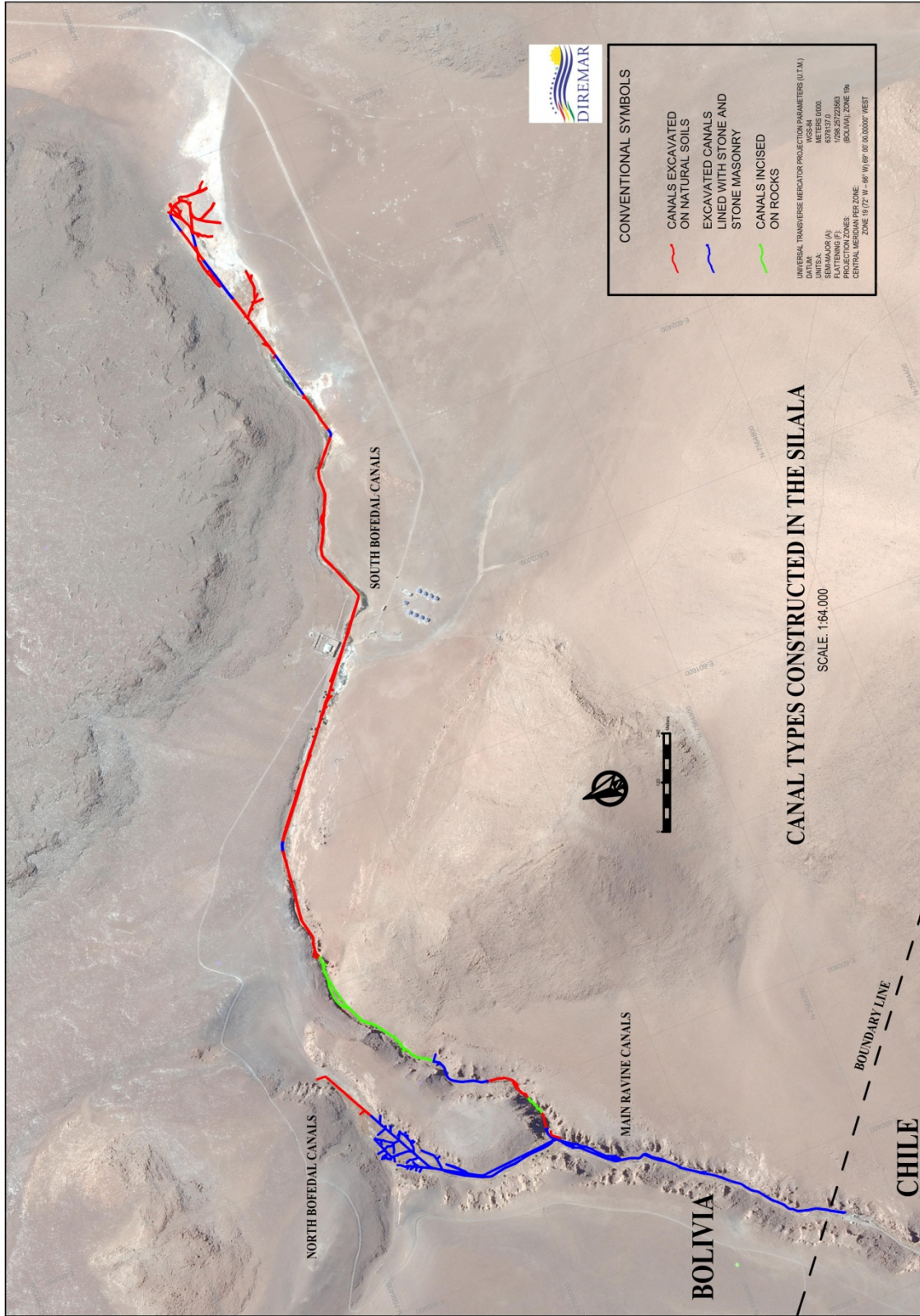


Figure 11: Canal types constructed in the Silala depicted on a satellite image (Source: DIREMAR, 2018)

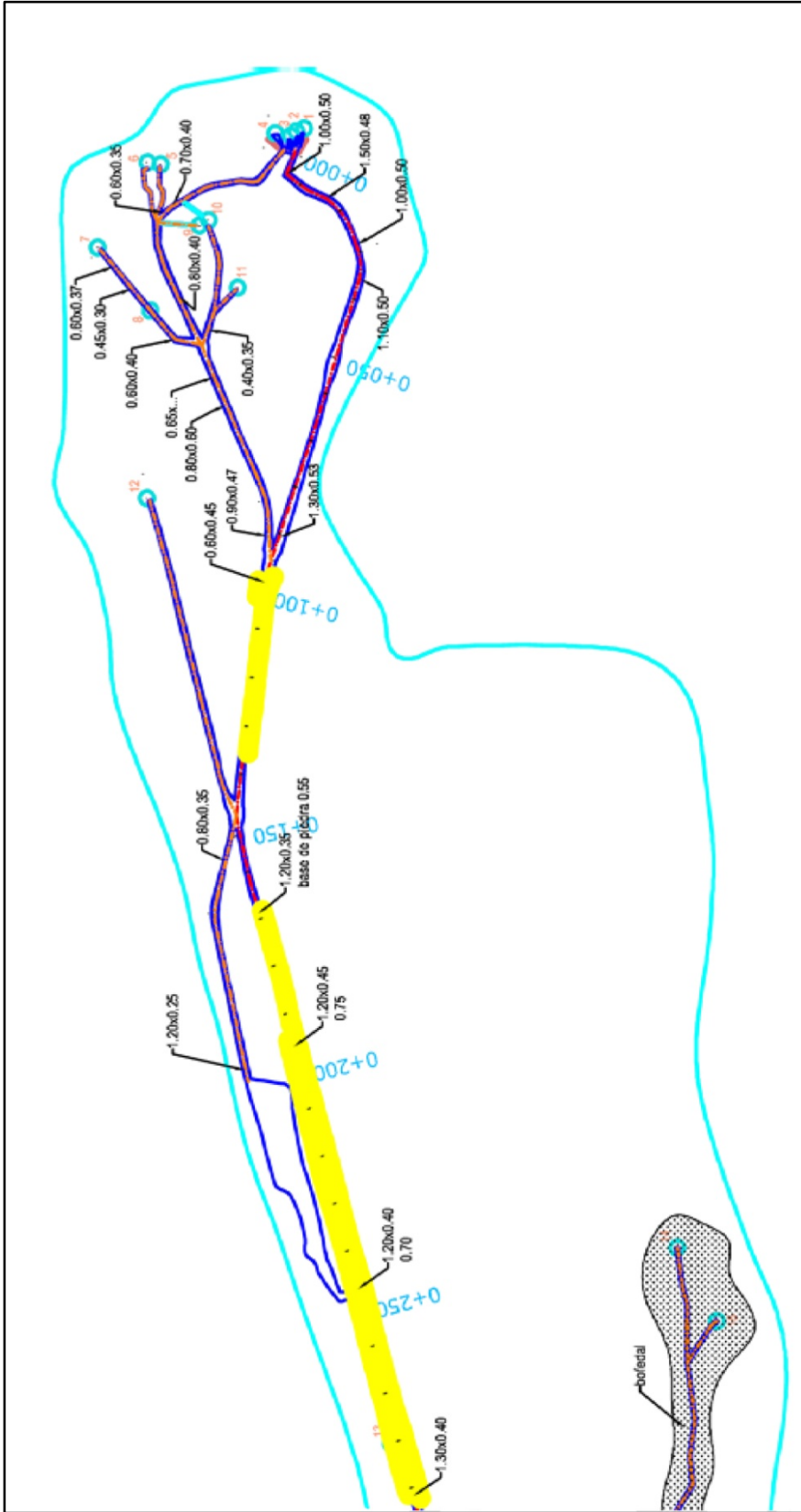


Figure 12: Distribution and dimensions of the channels in South (Orientales) Ravine of the Silala in Bolivia
 (Source: Annex G, in DHI, Final Report, p. 28)

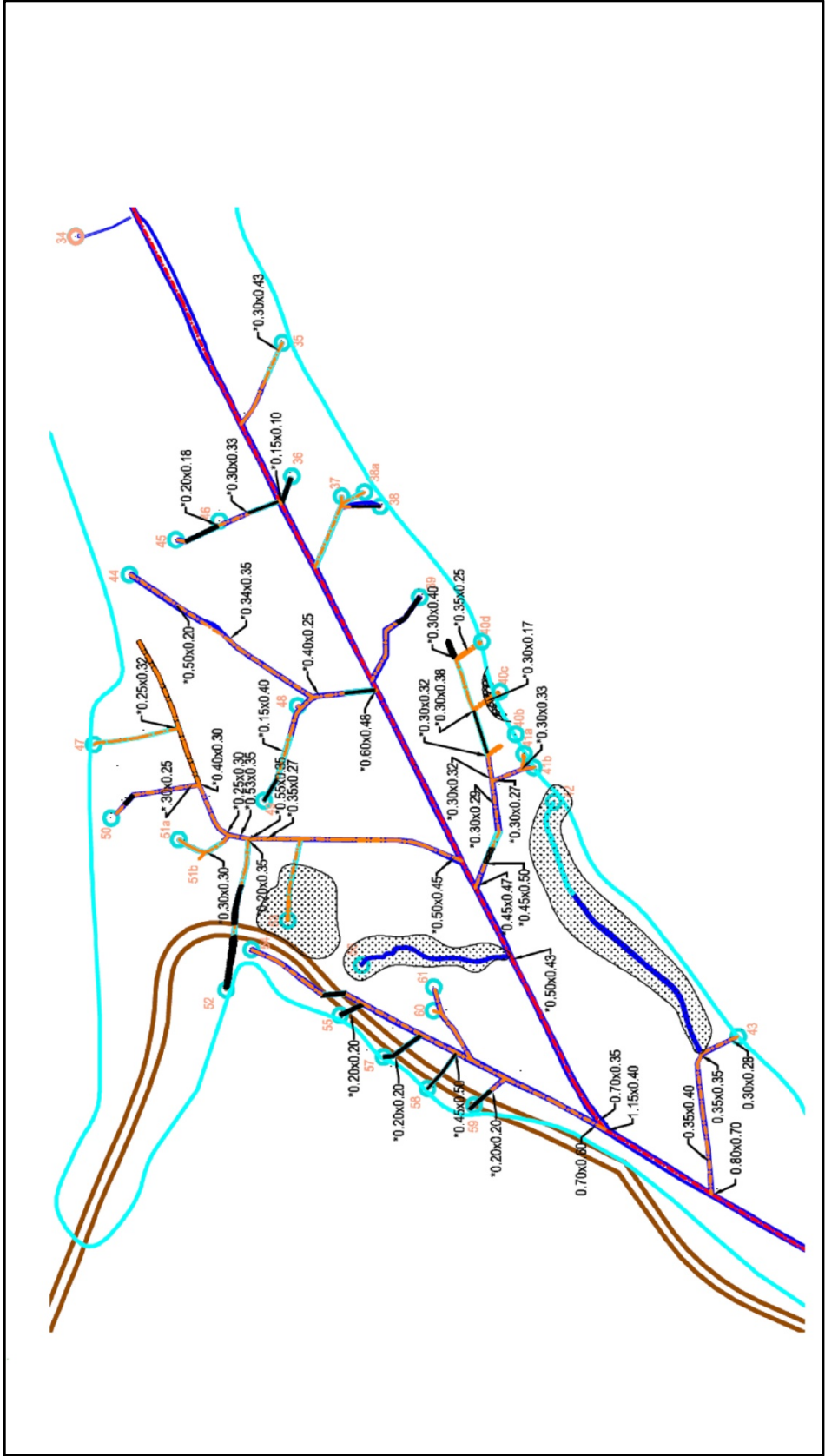


Figure 13: Distribution and dimensions of the channels in the North (Cajones) Ravine of the Silala in Bolivia

(Source: Annex G, in DHU, Final Report, p. 34)

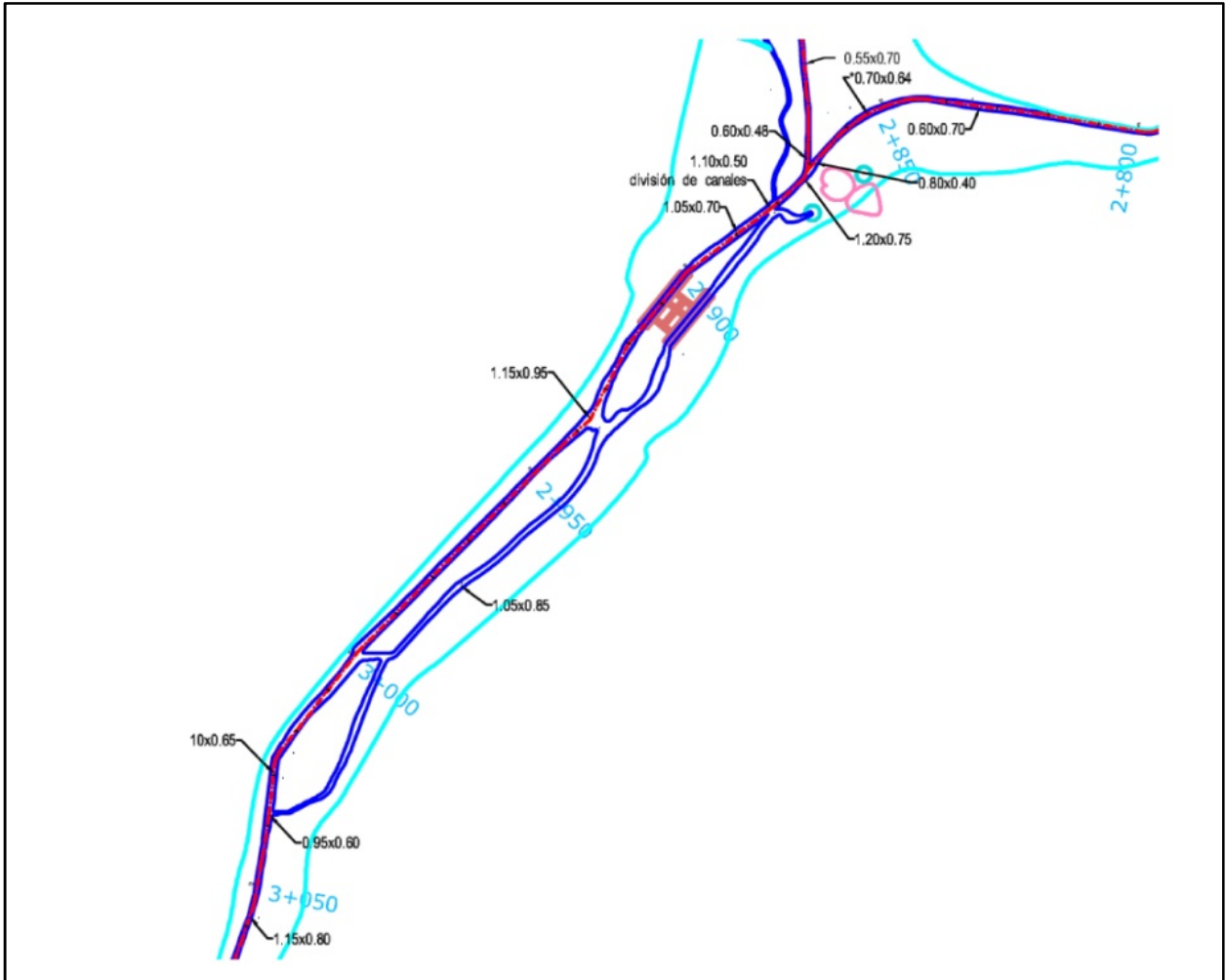


Figure 14: Channel distribution and dimensions in the Main Channel below the confluence of the two Silala ravines in Bolivia (Source: Annex G, in DHI, Final Report, p. 31)

52. The artificiality of the hydraulic infrastructure installed in Bolivian territory can be evidenced from the rectilinear and angular design that these works comprise in the area (**Figures 15 and 16**). In addition, by 1942, the Railway Company had completed 13 km of yet a second Silala pipeline from the desiltation chamber built in Chilean territory 40 meters from the border⁷⁸ to San Pedro Station to convey the waters generated by the channelization into Chilean territory.



Figure 15: The extensive network of artificial drainage mechanisms crossing the *bofedales* in the North (Cajones) Ravine of the Silala in Bolivia (Source: DIREMAR, 2017)

⁷⁸ Letter from the General Manager of the FCAB in Chile to the President of the Board of Directors of the FCAB in London, 3 September 1942. **CM, Vol. 3, Annex 68.**



Figure 16: Rectilinear channels with defined angles in the North (Cajones) Ravine of the Silala and limited typical *bofedal* vegetation that would be expected in thriving *bofedales* (Source: DIREMAR, 2017)

53. The channelization system was installed to improve the transport of Silala water into Chile, originally with the sole purpose to supply water for the Railway Company's steam locomotives.⁷⁹ By the early 1960s, these had been replaced by diesel locomotives. However, Chile had already unilaterally altered its initial use into the water intensive mining industries, in particular copper mining, and use by some nearby towns.⁸⁰ The scheme of water distribution was exploited by private operators. The infrastructure was necessary to create a more consistent and voluminous flow of water from the Silala springs in Bolivia, through the dense *bofedales*, and across the border into Chile.

⁷⁹ Deed of Concession by the State of Bolivia of the Waters of the Siloli (N° 48) to The Antofagasta (Chili) and Bolivia Railway Company Limited, 28 October 1908. **CM, Vol. 3, Annex 41.**

⁸⁰ C. R. Rossi, "The Transboundary Dispute over the Waters of the Silala/Siloli: Legal Vandalism and Goffmanian Metaphor", *Stanford Journal of International Law*, Vol. 53, 2017, pp. 62-63.

54. To increase and maximize water flow rates within the channels and drainage mechanisms, some parts of the infrastructure were lined with large, flat stones at the base of each channel and conduit, as well as on the sides (**Figure 17**). In some cases, the channels and drainage mechanisms were also covered with flat stone roofs, or replaced with a steel pipe, to further minimize losses due to leakage and evaporation⁸¹ (**Figure 18**).



Figure 17: Silala spring directly connected to an artificial channel where the spring emerges from the formation (Source: DIREMAR, 2016)

⁸¹ Hauser, A. 2004. *Morphological, Geological, Tectonic, Hydrogeological and Hydrochemical Context: Morphogenesis, Evolution and Modalities of Use of the Shared Chilean-Bolivian Hydrographic System*. National Geology and Mining Service (SERNAGEOMIN). **CM, Vol. IV, Annex II, Appendix A**, pp. 21-22.



Figure 18: Drainage pipe adjacent to a Silala spring where the spring emerges from the formation (Source: Annex C, in DHI, Final Report, p. 16)

55. The Railway Company carried out maintenance on the artificial infrastructure in Bolivia until 1997, completely removing the surrounding vegetation.⁸²

⁸² **Expert Report 1**, Fig. 7, p. 20, CM, Vol. 1.

D. Effects and Consequences of the Artificial Enhancement of the Silala

56. As shown above,⁸³ since 1999 Bolivia and Chile have considered that to settle the controversy it is necessary to determine the influence of the artificial installations in the Silala on the flow of its waters. In its Memorial, Chile's experts estimate that "the channels in Bolivia have had limited effect on the extent of the Orientales and Cajones wetlands in Bolivia, due to the shallow depth of the channels."⁸⁴ While the extent of the effects of the channelization on Bolivia's Silala springs, water flow, and wetlands have still not been fully ascertained, their implementation, operation, and maintenance have clearly and significantly altered the entire hydrology, hydrogeology, and ecology of the Silala in Bolivia.
57. In its Memorial, Chile claims that "[t]he waters of the Silala River have flowed and continue to flow naturally from Bolivian territory into Chile, before, after and independently of the construction of these channels."⁸⁵ It further asserts that the network of channels and drainage mechanisms was constructed "for sanitary reasons"⁸⁶ and that the "effect of the channels on the cross-boundary flow, due to reduced evaporation in the wetlands, is therefore very limited and calculated to be less than 3.4 l/s or 2% of the annual average flow."⁸⁷
58. Simplistic and categorical in form, Chile's assertions are based on conjecture and an incorrect factual and technical background. In particular, Chile ignores the very purpose and justification for the construction of the channels, as well as the reality that channelization of the Silala in Bolivia has substantially modified the Silala

⁸³ BCM, paras. 26-39.

⁸⁴ CM, pp. 32-33, para. 2.27.

⁸⁵ CM, p. 32, para. 2.26.

⁸⁶ CM, p. 32, para. 2.25.

⁸⁷ CM, p. 33, para. 2.27.

basin and had a significant influence on the rate and volume of flow of Silala waters in Bolivia.

59. Channelization of the Silala in Bolivia increased the discharge of spring water emerging from the Silala springs and other diffuse sources due to the lowering of the hydraulic head.⁸⁸ Nearly all of the upstream ends of the artificial drainage network constructed within both the North and South Ravines of Bolivia originate in an identifiable spring. At these spring discharge points, the soil and any underlying layers of coarser material and rocks, were completely removed, sometimes with explosives,⁸⁹ in order to increase drainage into the channels. As a result, the natural resistance to the emerging groundwater was considerably reduced and spring flow rates were boosted.
60. Under natural, pre-channelization conditions, less water emerged from the springs on the surface, as compared to the present, and more groundwater would have been retained in the subsurface formation than is currently being retained.⁹⁰ The artificial channels and drainage mechanisms effectively created a more direct and efficient means of drawing water from the springs and *bofedales* to the Main Channel of the Silala and across the Bolivian-Chilean border.⁹¹

⁸⁸ Appendix A2: Final Report, Annex D: Soil Analyses in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 18, **BCM, Vol. 3, Annex 17**.

⁸⁹ BCM, para. 61.

⁹⁰ Chile's own experts assert that the "constructed channels (...) act as drains and are able to receive water from the wetland soils." **Expert Report 1**, Sec. 2, p. 6, **CM, Vol. 1**. The logical conclusion from this assertion is that the channelization of the Silala increased the rate and volume of water flow from Bolivia's springs and *bofedales* to Chile.

⁹¹ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 81. **BCM, Vol. 2, Annex 17**.

61. Many of the spring discharge points in Bolivia still clearly evidence the use of explosives.⁹² Such blasting methods appear to have been used to stimulate spring flows by reducing or eliminating the resistance from narrow fissures, vegetation, and peat layers that naturally constrained the flow of water from the spring. As a result, many spring discharge points were altered substantially by lowering the discharge point and increasing the rate and volume of water flowing from the springs. These changes in turn lowered the water table in the immediate vicinity of each spring, and increased the capture area contributing water to the springs.⁹³ While the changes in the Silala springs cannot be precisely calculated today given the absence of baseline data, evidence from a case study in which blasting was used to enhance water flow through similarly fractured igneous and metamorphic rock indicates that such techniques can increase yield from wells by a factor of 6 to 20⁹⁴ **(Figure 19)**.

⁹² Annex F: Hydrogeology in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, pp. 97-98. **BCM, Vol. 4, Annex 17.**

⁹³ Annex F: Hydrogeology in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, pp. 97-98. **BCM, Vol. 4, Annex 17.**

⁹⁴ F. G. Driscoll, "Blasting – It Turns Dry Holes into Wet Ones", *Johnson Drillers' Journal*, Nov/Dec 1978, Johnson Division, UOP, Inc. St. Paul, MN, p. 3.



Figure 19: Rocks adjacent to channels and drainage mechanisms providing evidence of explosive blasts used to lower spring elevations and increase spring discharge (Source: Annex F, in DHI, Final Report, p. 97)

62. In addition, and contrary to Chile’s assertion that “the water that rises from springs in Bolivia cannot flow anywhere else but downhill into Chile,”⁹⁵ prior to the installation of the artificial channels, Silala waters within Bolivia’s *bofedales* region was relatively stagnant, with a considerably reduced cross-border water flow on the surface as compared to the present. This is evident from the various actions taken by the Railway Company when it secured its concession from Bolivia to draw water from Bolivia’s Silala region and into Chile.

63. In particular, by installing an intake mechanism and a complex system of artificial channels and drainage mechanisms within Bolivian territory near the *bofedales*, it is apparent that the Railway Company sought to reach slow-flowing and otherwise

⁹⁵ CM, p. 23, para. 2.8, *in fine*.

unreachable Silala waters and enhance their flow toward Chile. As recorded in the 1908 concession agreement, the Railway Company's official representative, Benjamín Calderón, asserted that:

“The Company that I represent is in need of those waters that are relatively adequate *to feed its locomotives (...)* By building intake and channeling works, the previously mentioned springs could be used, even if at increased cost; and the Company plans to execute such works *to use the waters for its railroad services.*”⁹⁶

64. If, prior to channelization, the Silala had flowed across the Bolivian-Chilean border in adequate volume and rate of flow to satisfy the Railway Company's needs and ambitions, it is inexplicable why the Railway Company would have needed to construct and install all of this infrastructure inside Bolivia's territory, in a region on the edge of the Atacama Desert that even today is exceptionally isolated and highly arid. In other words, in its pre-channelized natural condition, the Silala in Bolivia did not flow in the manner, rate, or volume that met the needs of the Railway Company; hence, their need to artificially modify and enhance it.
65. This conclusion is further supported by the assertion in the 1908 concession agreement, which explicitly states that only “[b]y building intake and channeling works, the previously mentioned springs *could be used, even if at increased cost.*”⁹⁷ Considering that the concession agreement called for channelization work to take place in Bolivia in order to facilitate use of Silala water in Chile, this provision is based on two elements: (a) without the intake and channelization within Bolivia, the

⁹⁶ Deed of Concession by the State of Bolivia of the Waters of the Siloli (N° 48) to The Antofagasta (Chili) and Bolivia Railway Company Limited, 28 October 1908 (emphasis added). **CM, Vol. 3, Annex 41.**

⁹⁷ Deed of Concession by the State of Bolivia of the Waters of the Siloli (N° 48) to The Antofagasta (Chili) and Bolivia Railway Company Limited, 28 October 1908 (emphasis added). **CM, Vol. 3, Annex 41.**

natural water flow and volume in Bolivia's Silala waters was not adequate to achieve the Railway Company's intended purpose of using Bolivia's waters in Chile; and (b) prior to channelization, the waters of the Silala did not flow naturally across the border in the rate and volume adequate for the Railway Company's intended purposes. The channelization was manifestly done to secure additional water for use in Chile.

66. Further, if prior to channelization sufficient water flowed across the Bolivian-Chilean border, there would have been no need to line the base and the sides of portions of the artificial channels and lateral drainage mechanisms with flat stones (or fit them with steel piping, as was done with some of the channels). Again, the only plausible explanation is that, prior to channelization, Bolivia's Silala waters stagnated in the ravines containing Bolivia's Silala wetlands causing volumes of water to evaporate and partially infiltrate prior to reaching the Bolivian-Chilean border. Contrary to what Chile suggests, as a result of the Railway Company's installation of the infrastructure, the flow and volume of the Silala waters increased considerably, making the costly investment worthwhile.
67. Bolstering this conclusion is the fact that the 1908 concession agreement also provides that "the projected work shall make usable waters *that are currently being lost benefitting no one.*"⁹⁸ It would have been illogical for the Railway Company to assert that the water was "being lost benefitting no one" unless (1) some of the Silala waters within Bolivia were not flowing naturally across the border into Chile, and (2) the pre-channelization flow rate and volume of water coursing across the

⁹⁸ Deed of Concession by the State of Bolivia of the Waters of the Siloli (N° 48) to The Antofagasta (Chili) and Bolivia Railway Company Limited, 28 October 1908 (emphasis added). **CM, Vol. 3, Annex 41.**

Bolivian-Chilean border were substantially less than those occurring after installation of the artificial channels and drainage mechanisms.⁹⁹

68. In its Memorial, Chile now suggests that the construction of the artificial channels and drainage mechanisms in Bolivia was principally set up for “sanitary reasons, to inhibit breeding of insects at the Silala River headwaters and avoid contamination of the potable water supply to Antofagasta.”¹⁰⁰ Not only does this claim ignore the original purpose of the channelization recorded in the 1908 concession agreement,¹⁰¹ it also disregards the fact that the additional infrastructure was implemented in 1928 to “renew[] and improve[e] the existing intake works” which “have been in use for the last 17 years (...) [and which] had become deteriorated and badly requires renewal.”¹⁰²
69. In addition, the “sanitary” objective cannot detract from the fact that the installation of the infrastructure increased the rate and volume of water flowing from Bolivia’s Silala wetlands area into Chile. To destroy conditions that favored insect breeding, the Railway Company had to eliminate or substantially reduce standing water and vegetation in the *bofedales*.¹⁰³ Channelization achieved that exact objective. Even Chile’s own experts recognized this impact. In describing the channel infrastructure, Expert Report 1 annexed to the Chilean Memorial asserts: “[t]he aim seems to have been to formalize the natural channel system to minimize erosion and to drain

⁹⁹ This was admitted by the Chilean Vice-Chancellor Mariano Fernandez in 1996 when he stated that the Silala “is a ravine from which waters that would be useless if they were not canalized fall (...) what was done is to prevent these waters from being lost into wetlands by building rock-canals for the water to run in a more organized fashion”. See El Diario, “*The Silala is not a matter of discussion for Chile*”, La Paz, 28 May 1996, **BCM, Vol. 2, Annex 14**.

¹⁰⁰ CM, p. 32, para. 2.25.

¹⁰¹ BCM, para. 63.

¹⁰² Letter from the General Manager of FCAB in Chile to the Secretary of the Board of Directors of FCAB in London, 27 January 1928. **CM, Vol. 3, Annex 67.1**.

¹⁰³ E. Oyague Passuni and M. S. Maldonado Fonkén, “Relationships between Aquatic Invertebrates, Water Quality and Vegetation in an Andean Peatland System, *Mires and Peat*, Volume 15 (2014/15), Article 14, pp. 1-21.

standing water,”¹⁰⁴ and the “constructed channels (...) act as drains and are able to receive water from the wetland soils.”¹⁰⁵ As explained below, the artificial channels and drainage mechanisms that were installed within the *bofedales* significantly and intentionally depleted those fragile wetlands,¹⁰⁶ thereby affecting the habitat.

70. In developing their conceptual model for the Silala, Bolivia’s experts have sought to estimate the impact of channelization on surface water and groundwater flows. However, because of the lack of pre-channelization baseline data, and the fact that channelization of the Silala has substantially modified the basin, the model was based on present-day Silala conditions without the existing artificial infrastructure.¹⁰⁷ Under current conditions, if the channels and drainage mechanisms were removed,¹⁰⁸ Silala surface flows would be expected to decrease by 30-40% as compared to current surface flows. In other words, of the current surface flows, as much as 64-84 l/s can be directly attributed to the artificial enhancements installed in the Silala within Bolivia. This estimate includes a 20-30% increase in evapotranspiration that would occur from the larger bodies of standing waters in the *bofedales*, as well as 8-12% (with a maximum potential of 25%) increase in losses due to infiltration.¹⁰⁹ In contrast, if the artificial infrastructure were to be removed, sub-surface groundwater flow through the 450 m wide cross section of the Silala

¹⁰⁴ **Expert Report 1**, pp. 18-19. **CM, Vol. 1**, pp. 146-147.

¹⁰⁵ **Expert Report 1**, Sec. 2, p. 6. **CM, Vol. 1**, p. 134.

¹⁰⁶ BCM, paras. 72-73.

¹⁰⁷ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 6. **BCM, Vol. 2, Annex 17**.

¹⁰⁸ Because of the substantial changes made to the Silala basin resulting from the channelization works, present-day conditions without the channels and drainage mechanisms are not equivalent to pre-channelization conditions. Nonetheless, such a comparison can provide insight and estimates into pre-channelization circumstances.

¹⁰⁹ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, pp. 41-42. **BCM, Vol. 2, Annex 17**.

catchment area at the Bolivian-Chilean border would be expected to increase by 7-11% as compared to present subsurface flows.¹¹⁰

71. Channelization of the Silala in Bolivia for the purpose of increasing the volume and rate of its flow has had a profound and long-lasting impact on the Silala *bofedal* ecosystem.
72. The artificial drainage network constructed within both the North and South Bolivian Silala Ravines effectively diverted water into the subsidiary main channels of the two ravines and then to the Main Channel, thereby preventing the water from slowly filtering naturally through the wetlands. As a result, the *bofedales* were substantially dewatered thereby affecting the natural habitat.
73. According to the 2018 Ramsar Convention Secretariat Report on the site Los Lípez in Bolivia, “[t]he wetlands found in the Silala area have been highly affected by the construction of the water-catchment canals started in 1908. At present, there are only vestiges of the original wetlands that used to cover an area of about 141,200 m², or 14.1 hectares. The current surface area of the wetlands covers only about 6,000 m², or 0.6 ha., which are surrounded by the water catchment works and artificial canals.”¹¹¹ Today, a narrow riparian fringe of vegetation suggests accessibility to water only in close proximity of the canal¹¹² (**Figure 20**).

¹¹⁰ Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, p. 41. **BCM, Vol. 2, Annex 17.**

¹¹¹ Ramsar Convention Secretariat, *Report Ramsar Advisory Mission N° 84, Ramsar Site Los Lípez, Bolivia*, 2018, p. 38. **BCM, Vol. 5, Annex 18.**

¹¹² Annex C: Surface Waters, in Danish Hydraulic Institute (DHI), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, pp. 8-9. **BCM, Vol. 2, Annex 17.**

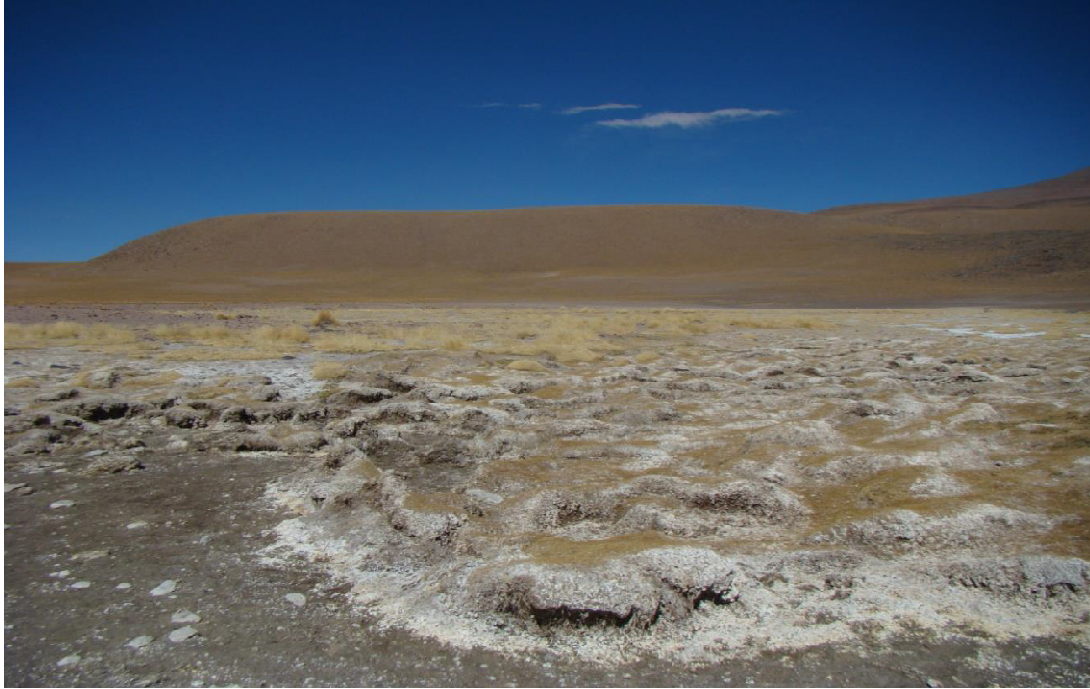


Figure 20: Effects of desiccation on the South (Orientales) Silala *Bofedal* (Source: DIREMAR, 2018)

74. As a result of the considerable alteration of the Silala, the present-day rate and volume of water flowing on the surface and through the subsurface of the basin are of a combined natural and artificial origin. Some of the water coursing through the Silala, including some of the water flowing across the Bolivian-Chilean border, can be described as occurring naturally. However, contrary to Chile's assertions, the rest of that water flows solely as a result of the implementation of the drainage network that crisscrosses the two Silala ravines in Bolivia and that enhances the flow of the water by draining the springs and wetlands in Bolivia and transporting their waters into channels that flow into Chile. The proportions of natural versus artificial flows and volumes have been estimated in Bolivia's studies. As mentioned above,¹¹³ under current conditions, if the channels and drainage mechanisms were removed, the

¹¹³ BCM, para. 70.

Silala surface flows would be expected to decrease by 30-40% as compared to current surface flows.

E. Final Remarks

75. The Silala basin comprises a highly complex system of springs, surface waters, and groundwaters, as well as groundwater-dependent ecosystems in the form of the *bofedales*. Over many decades, both Bolivia and Chile, through joint and independent efforts, have endeavored to gain a better understanding of the intricacies of the basin including its origin, geographic extent, capacity, and flow regime, as well as the influence that the artificial channels and drainage installations have on the flow. Most recently, additional data and information have been obtained allowing further knowledge about the hydrology and hydrogeology of the region.
76. Today, it is known that drainage and channelization of the Silala in Bolivia has had a considerable impact on the discharge of spring water emerging from the Silala springs, as well as the rate of flow and volume of water traversing the Bolivian-Chilean border. By evaluating the Silala without the presence of the artificial infrastructure, the most recent expert study conducted by the Danish Hydraulic Institute in 2018 suggests that surface flows would decline by 30-40% below current surface flow rates, while groundwater flows would increase by 7-11% as compared to present subsurface flows.
77. In addition, said report indicates that the water in the Silala currently flows across the Bolivian-Chilean border on the surface and through subsurface formations at a variable flow rate of approximately 160-210 l/s. Moreover, the evidence is clear that this flow comprises both natural and artificial flows, the latter being the direct product of the artificial drainage and channelization of the waters of the Silala.

78. Finally, evidence shows that the *bofedales* that occupy portions of the two Silala ravines in Bolivia are critically dependent on the waters of the Silala, primarily groundwater, and that they are vulnerable to changing climatic and other conditions. Moreover, these fragile wetlands have suffered considerable degradation and reduction in geographic scope as a direct result of the drainage and channelization mechanisms installed throughout the ravines.

CHAPTER 3

NATURE OF THE SILALA UNDER INTERNATIONAL LAW

79. In the present Chapter, Bolivia will show that the Silala and its waters, whose factual nature and characteristics were identified in the previous chapter, do not qualify, in their entirety, as an international watercourse under customary international law. They do not for two reasons. Customary international law on the non-navigational uses of international watercourses only applies to the natural flow of watercourses. And, as shown in the previous chapter, the waters of the Silala are part of an artificially enhanced watercourse that includes both naturally- and artificially-flowing water.

A. International Watercourses in Customary International Law

80. Under customary international law, the obligations that States have to each other in relation to non-navigational uses of international watercourses are limited to the natural flow of the waters. As authoritative doctrine states, “[t]he flow of boundary, or international, rivers is not within the arbitrary power of one of the riparian states, for it is a rule of international law that no state is allowed to alter the *natural* conditions of its own territory to the disadvantage of the *natural* condition of the territory of a neighbouring state.”¹¹⁴ In a similar vein, it has been considered that “[e]very state must allow rivers (...) to flow *naturally*.”¹¹⁵ In relation to the Silala, it has been observed accordingly that “[a] manufactured river, in the form of canals or other man-made systems, would not fall within the rubric of international water law,

¹¹⁴ R. Jennings and A. Watts (eds.), *Oppenheim’s International Law*, Longman, 9th ed., 1996, p. 585 (emphasis added).

¹¹⁵ M. Huber, *Ein Beitrag zur Lehre von der Gbietshoheit an Grenzflüssen*, Zeitschrift für Volkerrecht und Bundesstaatsrecht, 1907, pp. 29 ff. and 159 ff., translated in S. McCaffrey, *The Law of International Watercourses*, Oxford University Press, 2007, p. 132 (emphasis added).

since, by definition, such water bodies are proprietary and subject to the agreements that created them.”¹¹⁶

81. International and domestic judicial decisions also recognize the legal relevance of the distinction between the existence of natural and artificial flows. For instance, in the *Lake Lanoux* arbitration, it was specified that what was relevant in terms of obligations related to uses of transboundary waters was “le volume qui corresponde aux apports *naturels* du Lanoux au Carol.”¹¹⁷ It has also been decided by domestic courts that “[n]o State may substantially impair the *natural* use of the flow of such a river by its neighbor” and that “every State must submit to the *natural* flow of the water in spite of its consequences.”¹¹⁸ In *Gabcikovo-Nagymaros*, Hungary’s claim was limited to its right “to 50% of the *natural* flow of the Danube,” by virtue of the 1976 Convention on Regulation of Water Management Issues of Boundary Waters.¹¹⁹
82. State practice confirms that under international law, in situations of watercourses involving naturally and artificially flowing waters, States consider their obligations and rights distinctly. Various agreements explicitly limit their application to the natural flow of a shared watercourse. For example, Article 7 of the 1996 Mahakali Treaty stipulates that “[i]n order to maintain the flow and level of the waters of the Mahakali River, each Party undertakes not to use or obstruct or divert the waters of the Mahakali River adversely affecting its *natural* flow and level except by an

¹¹⁶ B. Mulligan and G. Eckstein, “The Silala/Siloli Watershed: Dispute Over the Most Vulnerable Basin in South America”, *International Journal of Water Resources Development*, Vol. 27(3), 2011, pp. 595-606.

¹¹⁷ *Affair du Lac Lanoux (Spain v. France)*, Award of 16 November 1957, *Reports of International Arbitral Awards*, Vol. XII, p. 303 (emphasis added).

¹¹⁸ S. McCaffrey, *The Law of International Watercourses*, Oxford University Press, 2007, pp. 242-244 (emphasis added), citing *Württemberg and Prussia v Baden (Donauversinkung case)*, German Staatsgerichtshof, 18 June 1927, pp. 131-132.

¹¹⁹ *Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, I.C.J. Reports 1997, p. 73, para. 125 (emphasis added).

agreement between the Parties.”¹²⁰ Article 6 of the 1995 Mekong River Agreement obligates the Parties to ensure in the mainstream of the Mekong River a “minimum monthly natural flow during each month of the dry season,” and a “natural reverse flow of the Tonle Sap to take place during the wet season.”¹²¹ Article XIII of the Columbia River Treaty restricts diversions of “any water from its *natural* channel in a way that alters the flow of any water as it crosses the Canada-United States of America boundary within the Columbia River basin.”¹²² The Canada-United States Boundary Waters Treaty similarly limits its applicability to the “natural channels” of tributaries and the “natural level or flow of boundary waters.”¹²³

83. Considering that customary international law only imposes obligations in relation to the *natural* flow of international watercourses, under customary international law, there is therefore no obligation to install or to maintain infrastructures for the purposes of increasing the flow and enhancing the use of transboundary waters. There is no right for a State to require another State to install or maintain such infrastructures for its benefit. This is reflected, *a contrario*, in Article 26 of the United Nations Watercourses Convention (hereinafter “UNWC”) which deals with “installations” *only* to the extent that they may cause significant adverse effects.¹²⁴

¹²⁰ Treaty between His Majesty’s Government of Nepal and the Government of India concerning the Integrated Development of the Mahakali Barrage Including Sarada Barrage, Tanakpur Barrage and Pancheshwar Project, 12 February 1996 (emphasis added). According to M. M. Rahaman, “[t]his means each Party has an obligation to maintain the natural flow of the river.” See M. M. Rahaman “Principles of Transboundary Water Resources Management and Ganges Treaties: An Analysis”, *Water Resources Development*, Vol. 25, No. 1, March 2009, at p. 165.

¹²¹ Art. 6 of the Agreement for the Cooperation of the Sustainable Development of the Mekong River Basin, 5 April 1995, UNTS, Vol. 2069, No. 35844, p. 7.

¹²² Art. XIII, Treaty Relating to Cooperative Development of the Water Resources of the Columbia River Basin, 17 January 1961, 542 UNTS 244, pp. 264-266 (emphasis added).

¹²³ Arts. II and III, Treaty between the United States and Great Britain relating to Boundary Waters, and Questions Arising Between the United States and Canada, 11 January 1909, T.S. No. 548, 36 Stat. 2448.

¹²⁴ For the relevant State practice on security and safety of hydraulic installations, see Mr. Stephen C. McCaffrey, Special Rapporteur, *Sixth report on the law of the non-navigational uses of international*

84. Distinguishing artificial and natural conditions of geographic or geologic features to determine their legal effects is not limited to international watercourses. It constitutes a general approach in international law, in particular in relation to natural resources and allocation of rights over land or maritime areas.
85. For example, under the law of the sea, artificial structures are not subject to the same regime as natural features. Article 11 of the United Nations Convention on the Law of the Sea ('UNCLOS') provides that "artificial islands shall not be considered as permanent harbour works," while Article 60(8) provides that "[a]rtificial islands, installations and structures do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf."¹²⁵
86. Following these provisions, an arbitral tribunal recently concluded that the UNCLOS requires that "the status of a feature be ascertained on the basis of its earlier, natural condition, prior to the onset of significant human modification."¹²⁶ As a result, the arbitral tribunal determined that it "will therefore reach its decision on the basis of the best available evidence of the previous status of what are now heavily modified coral reefs."¹²⁷ The Tribunal also asserted that "[j]ust as a low-tide elevation or area of seabed cannot be legally transformed into an island through human efforts, (...) a rock cannot be transformed into a fully entitled island through

watercourses, U.N. Doc. A/CN.4/427 and Add.1, *Yearbook of the International Law Commission*, 1990, Vol. II (Part One), pp. 53-57, paras. 20-36. This practice does not reveal the existence of any obligation under customary international law to install or maintain artificial infrastructures for the purposes of increasing the flow and enhancing the use of transboundary waters. For the Convention see UN Doc. A/RES/51/266, 21 May 1997.

¹²⁵ Art. 60, United Nations Convention on the Law of the Sea, 3 December 1982, 1833 UNTS 3.

¹²⁶ *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19, Award of 12 July 2016, p. 132, para. 306.

¹²⁷ *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19, Award of 12 July 2016, pp. 131-132, para. 306.

land reclamation. The status of a feature must be assessed on the basis of its natural condition.”¹²⁸

87. In another case interpreting the UNCLOS and international law, the Court in *Maritime Delimitation in the Black Sea* concluded that the landward end (rather than the seaward end) of the Sulina Dyke “where it joins the Romanian mainland should be used as a base point for the establishment of the provisional equidistance line.”¹²⁹ Highlighting its artificial nature, the Court asserted, “[a]s a relevant base point for the purposes of the first stage of delimitation, it has the advantage, unlike the seaward end of the dyke, of not giving greater importance to an installation than to the physical geography of the landmass.”¹³⁰
88. In *Qatar/Bahrain*, the Court similarly observed that, since “Bahrain undertook reclamation works for the construction of a petrochemical plant, during which an artificial channel was dredged connecting the waters on both sides of Fasht al Azm,” there was a dispute on whether or not “Fasht al Azm must be deemed to be part of the island of Sitrah or whether it is a low-tide elevation which is not naturally connected to Sitrah Island.”¹³¹

¹²⁸ *The South China Sea Arbitration (The Republic of Philippines v. The People’s Republic of China)*, PCA Case No. 2013-19, Award of 12 July 2016, p. 214, para. 508.

¹²⁹ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 108, para. 140.

¹³⁰ *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, Judgment, *I.C.J. Reports 2009*, p. 108, para. 139.

¹³¹ *Maritime Delimitation and Territorial Questions between Qatar and Bahrain, Merits, Judgment, I.C.J. Reports 2001*, p. 97, para. 188. The Court eventually decided that “[a]fter careful analysis of the various reports, documents and charts submitted by the Parties, the Court has been unable to establish whether a permanent passage separating Sitrah Island from Fasht al Azm existed before the reclamation works of 1982 were undertaken. For the reasons explained below, the Court is nonetheless able to undertake the requested delimitation in this sector without determining the question whether Fasht al Azm is to be regarded as part of the island of Sitrah or as a low-tide elevation” (p. 98, para. 190).

89. Along the same lines, the Court observed in the *Fisheries* case in 1951 that “the Indreleia is not a strait at all, but rather a navigational route prepared as such by means of artificial aids to navigation provided by Norway.”¹³² In these circumstances, it could on its own not create specific consequences under international law.
90. With regard to boundary rivers, in *Land and Maritime Boundary between Cameroon and Nigeria*, the Court “has first examined” whether “the course of the Keraua River has been diverted by Nigeria as a result of an artificial channel constructed by it in the vicinity of the village of Gange” before determining whether that channel, if not artificial, could be deemed to be the river designated as the boundary in the Thomson-Marchand Declaration.¹³³
91. In light of the above, under general international law, an international watercourse designates a natural flow of waters.

B. Scope of Customary International Law on Naturally-Flowing Watercourses

92. To support its assertion that customary international law applies to the Silala as a whole, including the artificial channels and drainage mechanisms, Chile refers in its Memorial to the broad definition of “watercourse” provided in the 1994 Draft Articles on the Non-Navigational Uses of International Watercourses adopted by the

¹³² *Fisheries case (United Kingdom v. Norway)*, Judgment, I.C.J. Reports 1951, p. 132. See similarly, expressing the view that a strait under the law of the sea only refers to a *natural* outlet and that any outlet which is the product of artificial, human work is not a strait, but a canal which is not regulated by the general law of the sea but either by specific agreements or by domestic law: S. Karagiannis, “Les détroits”, in M. Forteau, J.-M. Thouvenin (dirs.), *Traité du droit international de la mer*, Pedone, Paris, 2017, p. 446.

¹³³ *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, I.C.J. Reports 2002, p. 365, para. 95.

ILC:¹³⁴ “a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus.”¹³⁵ The 1994 Draft Articles also define an international watercourse as: “a watercourse, parts of which are situated in different States.”¹³⁶

93. Bolivia disagrees with Chile’s indiscriminate application of the terms and definitions of the 1997 UNWC to the Silala. On the one hand, the specifics of the Silala do not allow a broad application of the definitions for “watercourse” and “international watercourse” incorporated in this Convention to the Silala as they do not reflect customary international law on the use of artificially enhanced watercourses. On the other hand, State practice and case law confirms that an “international watercourse” only refers to the natural flow of that water body under customary international law.

94. In order to advance the applicability of the Convention to the specific circumstances of the Silala, Chile relies on definitions of the term ‘international watercourse’, which fail to reflect the actual text as finally approved.¹³⁷ An illustration of this misrepresentation is Chile’s attempt to include canals in the definition by using a mere “working hypothesis” adopted by the International Law Commission (ILC) in 1980,¹³⁸ which was not ultimately accepted.

¹³⁴ CM, pp. 52-53, paras. 4.3-4.4 and pp. 54-55, paras. 4.7-4.10. See also, implicitly, pp. 1-2, para. 1.3 (a) and pp. 29, para. 2.17.

¹³⁵ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), p. 90, Draft Article 2 (b).

¹³⁶ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), p. 90, Draft Article 2 (a).

¹³⁷ CM, p. 52, para 4.3.

¹³⁸ CM, pp. 52-53, para. 4.3, footnote 106. As Special Rapporteur S. Schwebel noted, “No definite definition was attempted. Instead, a working hypothesis subject to refinement and change, was arrived at.” *Yearbook of the International Law Commission*, 1982, Vol. II, Part 1, p. 68, para. 7.

95. In its Commentaries on its 1994 Draft Articles, the ILC referenced “canals” in its understanding that the components of “system of surface and ground waters” can include “rivers, lakes, aquifers, glaciers, reservoirs and *canals*.”¹³⁹ That statement, however, was immediately qualified in the next paragraph of the Commentary. The ILC explained that “certain members of the Commission expressed doubts about the inclusion of “canals” among the components of a watercourse because, in their view, the draft had been elaborated on the assumption that a ‘watercourse’ was a *natural* phenomenon.”¹⁴⁰
96. For example, during the ILC’s 1987 session, Special Rapporteur on the Law of the Non-Navigational Uses of International Watercourses, Stephen McCaffrey, stated that “[t]he term ‘international watercourse’ was normally used to refer to a watercourse created by nature and *not to any artificial diversions*.”¹⁴¹
97. In the context of non-navigational uses, the definition of watercourse in Article 2 of the 1994 Draft Articles was described as the “most significant, but also the most controversial aspect of this part [of the Draft Articles].”¹⁴²

¹³⁹ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. 2 (Part Two), p. 90, Commentary (4) to Article 2 (emphasis added).

¹⁴⁰ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. 2 (Part Two), p. 90, Commentary (5) to Article 2 (emphasis added).

¹⁴¹ Draft Articles proposed by the Drafting Committee, *The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/CN.4/L.411, *Yearbook of the International Law Commission*, 1987, Vol. I, p. 220, para. 75 (emphasis added).

¹⁴² Comments and observations received from Governments, *The Law of the Non-Navigational Uses of International Watercourses*, A/CN.4/447 and Add. 1-3, *Yearbook of the International Law Commission*, 1993, Vol. II (Part One), p. 165, para. 2 (Poland). The “draft articles” to which Poland referred to are the 1994 Draft Articles that predated and led to the United Nations Watercourses Convention.

98. As to State practice, the most that can be deduced related to the definition of an international watercourse is that it limits that definition to the *natural* flow contained within the main channel of a river that traverses an international boundary.¹⁴³
99. Legal doctrine also disqualifies Chile's construction of the definition of an international watercourse. For instance, according to the *Max Planck Encyclopedia of Public International Law*:¹⁴⁴

“Canals are *artificial* waterways that for purposes of international legal regulation (...) must be distinguished from *natural* waterways such as international watercourses or international straits (...)”

“Differences in use and in geographical situation make it impossible to identify general rules of customary international law applicable to all canals of international concern. (...) Moreover, in most cases the use and administration of canals serving more than one State or affecting the interests of more than one State are regulated by way of a conventional regime. Therefore, the relevant rules are to be ascertained with reference both to the specific use to which a canal is dedicated and to the existing treaty provisions applying to it.”

And it continues:

“Internal canals that are totally confined to the territory of one State are subject to the exclusive sovereignty of that State. Lacking unilateral or conventional commitment to that effect, there is no international obligation for a State to build a canal on its territory,

¹⁴³ A. Tanzi, “The UN Convention on International Watercourses as a Framework for the Avoidance and Settlement of Waterlaw Disputes,” *Leiden Journal of International Law*, Vol. 11, Issue 3, 1998, p. 447.

¹⁴⁴ M. Arcari, “Canals”, *Max Planck Encyclopedia of Public International Law*, online version, last updated October 2007, para. 1 and paras. 4-6 (emphasis added).

nor to maintain or operate an internal canal in the interest of other States.”

“Unlike international watercourses which separate or traverse the territories of different States, a canal lying across national boundaries consists of two national sections, each remaining an internal waterway of the State where it is situated. Yet interested States can regulate via conventions their respective rights and obligations relating to transboundary canals.”

100. Chile’s own insistence in the Memorial on the Silala as a *natural* flow of waters is consistent with the fact that under general international law, the concept of international watercourses is generally considered as referring to the natural flow of waters. On many occasions in the Memorial, Chile puts the emphasis on this natural element. For instance, Chile alleges that “the waters of the Silala River have flowed and continue to flow *naturally* from” Bolivia to Chile¹⁴⁵ and that the artificial installations have nearly no effect on the natural flow.¹⁴⁶ In the “summary” of its case, Chile further states that the Silala is a watercourse because it is a “*naturally* flowing body of water.”¹⁴⁷ Chile quotes in particular the Note Verbale of 15 September 1999 in which it considered that the Silala is an international watercourse because it has “a permanent *natural* runoff” which flows from Bolivia to Chile.¹⁴⁸ In a press release dated 4 March 2002, Chile again “can only reiterate its formal reservation regarding its rights over the Silala River, due to its nature as a shared water resource that has its origins in Bolivia and flows *naturally* into Chilean

¹⁴⁵ CM, p. 32, para. 2.26 (emphasis added).

¹⁴⁶ CM, p. 32, para. 2.27

¹⁴⁷ CM, p. 7, para. 1.16 (a) (emphasis added).

¹⁴⁸ CM, pp. 40-41, para. 3.10 (emphasis added).

territory.”¹⁴⁹ In other paragraphs of the Memorial, Chile refers to the status of the Silala as a watercourse on the ground that it is “*naturally* flowing.”¹⁵⁰

101. In conclusion, the lack of support and the uncertainty surrounding the inclusion of artificial canals within the concept of a watercourse indicate that the use of “canals” by the ILC in its commentaries to the 1994 Draft Articles is not based on customary international law applicable to international watercourses. Rather, the evidence indicates that the accepted norm is to exclude artificial conveyance mechanisms like canals and drainage mechanisms from the scope of customary international law applicable to transboundary watercourses.
102. The foregoing examination demonstrates that the definitions for “watercourse” and “international watercourse” proffered by Chile are not supported by the existing applicable customary international law on the use of transboundary watercourses when referring to artificially enhanced water flows. Chile’s preferred terminologies and definitions not only do not apply to the circumstances of the Silala, but are inconsistent with its official position at the time of the ILC discussions.¹⁵¹

¹⁴⁹ Press Release from the Ministry of Foreign Affairs of Chile, 4 March 2002. **CM, Vol. 3, Annex 60** (emphasis added).

¹⁵⁰ CM, p. 75, paras. 4.37 ff (emphasis added). See also, for instance, CM, p. 90, para. 4.66 (“the Silala is a watercourse that follows the natural course downhill”), or CM, p. 100, para. 5.23.

¹⁵¹ Chile did not agree with the expression “international watercourse” during the negotiation of the 1997 United Nations Convention. During the debate sessions on Article 2 the Chilean delegation stated that: “the term ‘watercourse’ was confusing, as shown by the fact that some delegations wished to replace it with ‘river’, which was far too restrictive a term. His delegation proposed that ‘watercourse’ should be replaced by ‘hydrographic system’, ‘international watercourse’ by ‘hydrographic system with shared water resources’ and ‘watercourse State’ by ‘State belonging to a hydrographic system with shared water resources’”. United Nations, Sixth Committee, Summary Record of the 23rd meeting, 17 October 1996, A/C.6/51/SR.23, p. 11, para. 78, **BCM, Vol. 2, Annex 1**.

C. Regulation of the Artificially-Enhanced Silala Waters

103. As discussed in Chapter 2 of this Counter-Memorial, the scientific assessment and factual characteristics of the Silala clearly establish that the Silala, including the water that emanates from springs located within Bolivia, forms an artificially enhanced watercourse –one that has been modified by human engineering in a manner that substantially augments the flow and volume of the water that crosses the border. Today, the Silala contains both naturally- and artificially-flowing water.
104. Customary international law on the use of transboundary watercourses does not apply to the artificial components of a watercourse that is wholly or partly artificial. As already demonstrated, for that legal regime to apply to an artificially created or enhanced watercourse, there would need to be an agreement between the Parties, including a compromise on the adjustments required to take into account the artificial nature of the water body. Unfortunately, Bolivia and Chile thus far have been unable to reach such an agreement.
105. State practice shows that a watercourse that traverses an international boundary through artificial means, whether in whole or in part, can only create rights and obligations under international law through an agreement between two or more riparian States.¹⁵² The same can be said for a manufactured water flow that is

¹⁵² M. Arcari, “Canals”, *Max Planck Encyclopedia of Public International Law*, online version, last updated October 2007, para. 6 (recognizing that a canal crossing national boundaries effectively consists of two national sections, with each maintaining its domestic waterway character in the State where it is situated). In addition, Article 5, of the International Law Association’s 1980 Regulation of the Flow of Water of International Watercourses provides: “The construction of dams, canals, reservoirs or other works and installations and the operation of such works and installations required for regulation by a basin State in the territory of another can be carried out only by agreement between the basin States concerned.” (International Law Association, Report of the fifty-ninth conference, Belgrade, 1980 (Resolution of approval, p. 4; Report of the Committee on the International Water Resources Law, Part II-Regulation of the flow of water of international watercourses, pp. 362-373; Rapporteur: Judge E. J. Manner)). Similarly, Article 3 of the 1923

diverted into either a natural or artificial waterway traversing an international border. Absent an agreement authorizing the transfer of artificial water across the frontier, the State from whose territory the water originates has no obligation under international law to implement or maintain such a conveyance.

106. Moreover, when an agreement for such a transfer of manufactured water is terminated or is otherwise no longer operational, States have no obligation under international law to maintain the artificial drainage and other infrastructure within their territory for the benefit of other States.¹⁵³ As demonstrated elsewhere in this Counter-Memorial¹⁵⁴ the Parties made an attempt to agree on the nature and the use of the Silala waters. However, given the absence of such an agreement in the present case, Bolivia has the sole authority to decide on the artificial channels and drainage mechanisms within its sovereign territory.

107. This perspective on engineered flows and infrastructure and national sovereignty has long been recognized in customary international law. In its judgment on *Diversion of Water from the Meuse*, the Permanent Court of International Justice concluded:

“The Court finds nothing either in the arguments of the Netherlands or in the text of the Treaty of 1863 which would prevent either the Netherlands or Belgium from making such use as they may see fit of the canals covered by the Treaty in so far as concerns canals which

Convention relating to the Development of Hydraulic Power affecting more than one State provides: “If a Contracting State desires to carry out operations for the development of hydraulic power, partly on its own territory and partly on the territory of another Contracting State or involving alterations on the territory of another Contracting State, the States concerned shall enter into negotiations with a view to the conclusion of agreements which will allow such operations to be executed.”

¹⁵³ *Diversion of Water from the Meuse (Netherlands v. Belgium)*, Judgment, 28 June 1937, P.C.I.J. Series A/B No. 70, p. 26; see also Art 5, of the International Law Association’s 1980 Regulation of the Flow of Water of International Watercourses.

¹⁵⁴ BCM, paras. 36-40.

are situated in Netherlands or Belgian territory, as the case may be, and do not leave that territory. As regards such canals, each of the two States is at liberty, in its own territory, to modify them, to enlarge them, to transform them, to fill them in and even to increase the volume of water in them from new sources.”¹⁵⁵

108. Further, State practice abundantly shows that dam and hydroelectric facilities constructed along international watercourses needed the conclusion of a formal agreement authorizing the creation of those structures, or engaging the Parties in negotiation over expected benefits and detriments.¹⁵⁶ These agreements govern the

¹⁵⁵ *Diversion of Water from the Meuse (Netherlands v. Belgium)*, Judgment, 28 June 1937, P.C.I.J. Series A/B No. 70, p. 26.

¹⁵⁶ For example, Amistad Dam and Falcon Dam on the Rio Grande, which forms the border between Mexico and the United States, are managed jointly by both countries under the Treaty between the United States of America and Mexico relating to the utilization of the Waters of the Colorado and Tijuana Rivers and of the Rio Grande (3 February 1944), along with supplemental Minutes Nos. 182, 187, 190, 192, 199, 202, 205, 207, 210, 213, 215, 232, 235, 292, and 308. The Kariba Dam on the Zambezi River is owned and operated equally by Zimbabwe and Zambia through the Zambezi River Authority under Agreement between the Republic of Zimbabwe and the Republic of Zambia concerning the utilization of the Zambezi River (28 July 1987), with Annexure I (Article 22). Working arrangements for the operation and maintenance of the interconnected systems, and Annexure I (Article 23). Working arrangements for the sharing of energy from Kariba Dam. The Columbia River Agreement entered into by Canada and the United States implemented three dams in British Columbia, Canada (Duncan Dam, Mica Dam, and Keenleyside Dam) and one in Montana in the United States (Libby Dam) providing a complex series of power generation, flood control and water storage benefits. Treaty relating to cooperative development of the water resources of the Columbia River Basin (17 January 1961); Exchange of Notes Constituting an Agreement between Canada and the United States of America regarding Disposal within the United States of the Canadian Entitlement to Downstream Power Benefits Under the Columbia River Treaty (31 March 1999); Exchange of Notes Constituting an Agreement between Canada and the United States of America regarding Sale of Canada’s Entitlement to Downstream Benefits Under the Treaty Relating to Co-operative Development of the Water Resources of the Columbia River Basin (17 November 1961); Exchange of Notes Constituting An Agreement Between Canada and the United States of America Authorizing the Canadian Entitlement Purchase Agreement Provided for Under the Treaty Relating to Co-Operative Development of the Water Resources of the Columbia River Basin (17 January 1961 and 16 September 1964). While the treaty between Brazil and Paraguay on the Parana River that resulted in the Itaipú Dam and its vast energy generation capacities sparked several disputes with Argentina, the Three Party Corpus and Itaipú Treaty between Argentina, Brazil and Paraguay eventually resolved those differences. Treaty of Itaipú between Brazil and Paraguay (26 April 1973); Argentina-Brazil-Paraguay: Agreement on Parana River Projects. Done at President Stroessner City,

artificial aspects that have been implemented, including the location of artificial infrastructure, management of the engineered works, and rates and volumes of artificial flows. While customary international legal norms apply to those components of the watercourse that remain natural, the agreements apply to those aspects that are the product of human engineering.

D. Final Remarks

109. As demonstrated by the various expert reports, the Silala springs and waters today are part of an artificially enhanced watercourse that includes both naturally and artificially flowing water.¹⁵⁷ The artificial infrastructure and drainage mechanisms installed within Bolivia's borders have modified Bolivia's Silala springs and *bofedales* and enhanced the rate and volume of flow of Silala water coursing from Bolivia into Chile.¹⁵⁸
110. As such, the Silala and its waters are not governed exclusively by customary international law on the use of transboundary watercourses. Rather, that law is relevant only to the rate and volume of Silala water that flows *naturally* across the Bolivian-Chilean border. In contrast, given the absence of an agreement between Bolivia and Chile on the management or distribution of the Silala and its waters, Bolivia has full rights and authority over the *artificially* created flows and volumes of Silala water coursing across that frontier.

Paraguay (19 October 1979). The Indus Waters Treaty is a water distribution agreement between India and Pakistan that, when entered into in 1960, took into account existing and future artificial diversions, enhancements, and modifications to the river and its tributaries. Indus Waters Treaty 1960 Between the Government of India, the Government of Pakistan and the International Bank for Reconstruction and Development. Signed at Karachi (19 September 1960).

¹⁵⁷ BCM, Chapter 2.

¹⁵⁸ BCM, Chapter 2.

111. In addition, absent a specific obligation or agreement to the contrary, States have no obligation to maintain artificial infrastructure within their territory for the benefit of other States. Accordingly, Bolivia may decide whether and how to maintain the artificial channels and drainage mechanisms within its sovereign territory.

CHAPTER 4
LEGAL CONSEQUENCES OF THE SILALA
AS AN ARTIFICIALLY ENHANCED WATERCOURSE

112. Having demonstrated in the previous Chapters that the Silala springs and waters are part of an artificially enhanced watercourse, and that therefore the rules invoked by Chile do not apply to the artificially flowing Silala waters, the present Chapter will discuss the legal consequences arising from the nature of the Silala as an artificially enhanced watercourse.

113. Chile acknowledges in the Memorial that, once the status of the Silala is clarified, it would not be over-complicated for the Parties to agree on suitable rules for the management of the Silala. Chile states:

“It is Chile’s position that, once the status of the Silala River has been confirmed, the issues of use and restrictions on use can be decided with little difficulty.”¹⁵⁹

114. Bolivia agrees with Chile’s statement, which echoes the discussions and joint works that the Parties initiated after 1999 to identify the nature of the Silala waters and the efforts they made to reach an initial agreement on their use, which unfortunately has not yet been concluded.¹⁶⁰

115. In the face of Chile’s indiscriminate treatment of the Silala waters, the present Chapter will clarify the different and separate legal regimes that must be considered and that Chile systematically ignores. First, Bolivia has full sovereignty over the use of the artificial flow of waters which in absence of an agreement between Bolivia

¹⁵⁹ CM, p. 4, para. 1.6.

¹⁶⁰ BCM, paras. 27-40.

and Chile is to be regulated by Bolivian domestic law. Second, given the absence of an agreement between Bolivia and Chile on the naturally flowing waters of the Silala, these are regulated by customary international law. Unless an agreement is reached by the two States crafting a different set of rules for the ad hoc management of any component of or the entire Silala and its waters, which comprise water that flows naturally as well as water that is the result of artificial engineering, these two different and separate legal regimes each apply to the overall management of this unique and fragile, artificially enhanced watercourse.

116. Contrary to its present position, the application of two such distinct regimes was acknowledged by Chile in 1997. As was reported on 17 May 1997, at that time, Chile considered the annulment of the Concession on the Silala¹⁶¹ as an issue governed by domestic law, not international law:

“The Chilean Government said last night that there is no controversy with the Government of Bolivia regarding the use of the Silala River waters that supply the northern populations of our country and said that the issue is subject to a contract of International Private Law, which should be discussed in those terms. (...) According to the acting Minister of Foreign Affairs, Mariano Fernández, this is a contract of International Private Law and therefore follows the rules of all contracts. (...) “For now I have to say that there is no

¹⁶¹ Administrative Resolution No 71/97 by the Prefecture of the Department of Potosi, 14 May 1997, CM, p. 32, para. 2.24. **CM, Vol. 3, Annex 46**. The concession was revoked and annulled in 1997 on the grounds that its object, cause and purpose disappeared “by decisive supervening factors, such as the technological conversion of the locomotives of the concessionaire company, eliminating their need for water, for the steam power that previously propel them, to which must be added the non-existence of the concessionaire itself as an active corporate in Bolivian territory” and that “there has been evidence of the improper use of said waters by third Parties outside the granting of their use, with prejudice to the interests of the State and in clear violation of Articles 136 and 137 of the State Political Constitution.” For the Bolivian Supreme Decree N° 24660, 20 June 1997, see **BCM, Vol. 2, Annex 13**.

controversy between the Bolivian Government and the Chilean Government in this matter.”¹⁶²

A. The Right to Equitable and Reasonable Utilization of Naturally-Flowing Silala Waters

117. In its Application and Memorial, Chile requests the Court to adjudge and declare that “Chile is entitled to the equitable and reasonable use of the waters of the Silala River system in accordance with customary international law.”¹⁶³ It also requests the Court to declare that – pursuant to the “standard of equitable and reasonable utilization – Chile is entitled to its current use.”¹⁶⁴ The latter request, if accepted, could impede the exercise by Bolivia of its right under international law to make use of the waters of the Silala in the future.
118. With respect to the equitable and reasonable utilization of the Silala waters, Bolivia considers that Chile’s submissions should be dismissed as they purport to apply to all the Silala waters, including those artificially flowing. In addition, Chile’s submissions should be dismissed to the extent that they only concern Chile’s rights and disregard Bolivia’s rights. Chile’s current use of naturally flowing Silala waters can be recognized only where and to the extent that Bolivia’s right to an equitable and reasonable use of these waters is not prejudiced.
119. Starting with the first claim according to which “Chile is entitled to the equitable and reasonable utilization of the waters of the Silala River system in accordance with customary international law,” Bolivia agrees with Chile that the principle of

¹⁶² El Mercurio, “*Clarification from the Chilean Chancellery: There is no conflict with Bolivia over the Silala River.*” Santiago, 17 May 1997. **BCM**, Vol. 6, Annex 15.

¹⁶³ Application, p. 22, para. 50 b); CM, p. 107, b).

¹⁶⁴ Application, p. 22, para. 50 c); CM, p. 107, c).

equitable and reasonable use, as reflected in Articles 5 and 6 of the UNWC,¹⁶⁵ is “a cornerstone” of the law on international watercourses.¹⁶⁶ In practical terms, “[w]hat is an equitable and reasonable utilization in a specific case will (...) depend on a weighing of all relevant factors and circumstances.”¹⁶⁷ As emphasized by Chile in its Memorial, the equitable and reasonable utilization is a “flexible standard that must be adapted to fit the facts and circumstances of each case.”¹⁶⁸ The rule reflected in Article 6 of the UNWC presents an indicative and non-exhaustive list of factors that must be taken into account in determining the equitable and reasonable utilization of an international watercourse.¹⁶⁹ Moreover, all factors need to be

¹⁶⁵ Article 5 of the UNWC provides:

“1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse. 2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.”

¹⁶⁶ CM, p. 93, para. 5.6.

¹⁶⁷ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), p. 101, Commentary 1 to Article 6.

¹⁶⁸ CM, p. 94, para. 5.9.

¹⁶⁹ A non-exhaustive list of applicable factors is articulated in Article 6 of the UNWC under the title of “Factors relevant to equitable and reasonable utilization:”

“1. Utilization of an international watercourse in an equitable and reasonable manner within the meaning of article 5 requires taking into account all relevant factors and circumstances, including:

- (a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;
- (b) The social and economic needs of the watercourse States concerned;
- (c) The population dependent on the watercourse in each watercourse State;
- (d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse States;
- (e) Existing and potential uses of the watercourse;
- (f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;
- (g) The availability of alternatives, of comparable value, to a particular planned or existing use.”

considered together and no factor is to be given priority,¹⁷⁰ although “special regard” should be “given to the requirements of vital human needs.”¹⁷¹

120. On the other hand, Bolivia disagrees with Chile with regard to the scope of application of this principle in the present case. Bolivia considers that both Chile and Bolivia are each entitled to equitable and reasonable use, but only in relation to the naturally flowing waters of the Silala. In contrast, as explained previously in this Counter-Memorial,¹⁷² Bolivia has full sovereignty over the artificial flow of waters of the Silala on the ground that, absent any drainage and channelization mechanisms, waters that are mechanically induced or created would not naturally flow to the territory of Chile. The principle of equitable and reasonable use under customary international law does not apply to the artificial flow of the Silala waters.
121. A further consequence of Bolivia’s sovereignty over the artificial flow of waters of the Silala is that any use of such flow by Chile depends on Bolivia’s consent.¹⁷³

¹⁷⁰ While the relative weight of the various factors is not delineated in the principle, the ILC asserted that: “[s]ome of the factors listed may be relevant in a particular case while others may not be, and still other factors may be relevant which are not contained in the list. *No priority or weight is assigned to the factors and circumstances listed, since some of them may be more important in certain cases while others may deserve to be accorded greater weight in other cases.*” *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, Vol. II (Part Two), 1994, p. 101, Commentary 3 to Article 6 (emphasis added).

¹⁷¹ Art. 10 of the UNWC provides: “1. In the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses, 2. In the event of a conflict between uses of an international watercourse, it shall be resolved with reference to articles 5 to 7, *with special regard being given to the requirements of vital human needs*” (emphasis added).

¹⁷² BCM, Chapter 3.

¹⁷³ BCM, Chapter 6. It is important to point out that during the negotiation of the 1997 United Nations Convention, Chile maintained a favorable position for the States to exercise sovereignty over the part of a watercourse located in their territory. For example, in the explanation of its vote for the approval of the draft Convention, the Delegation of Chile stated that it “[...] had voted in favour of the draft Convention, despite its reservations with regard to some of its provisions. For example, the deletion of the reference to the sovereignty of the watercourse States over the part of the watercourse situated in their national territory was a serious omission, since the principle of State sovereignty was the point of departure for the whole process.” See: United Nations, Sixth Committee, Summary Record of

B. Current Use of the Silala Waters by Chile

122. Chile's second claim relating to equitable and reasonable utilization requests the Court to adjudge and declare that: "Under the standard of equitable and reasonable utilization, Chile is entitled to its current use of the waters of the Silala River."¹⁷⁴
123. A literal interpretation of this claim seems to suggest that Chile requests the Court to declare that the use of the Silala it currently enjoys should be secured in perpetuity. In other words, it suggests that the current rate and volume of water flow from Bolivia to Chile should not be subject to future modification and that any subsequent alteration in favor of Bolivia violates Chile's right to its Court-adjudged equitable and reasonable current use. Such claim is plainly contrary to international law and violates Bolivia's equal right to an equitable and reasonable share of the naturally-flowing waters of the Silala, as well as its exclusive rights over the artificial flow of Silala waters. This leads to the result that a State (in this case Chile) would be able to "unilaterally assum[e] control of a shared resource, and thereby depriv[e] [another State] of its right to an equitable and reasonable share of the natural resources of the [shared resource]."¹⁷⁵ This position is clearly untenable.

the Second Part of the 62nd meeting, 4 April 1997, A/C.6/51/SR.62/Add.1, pp. 6-7, para. 24. **BCM, Vol. 2, Annex 3.**

¹⁷⁴ Application, p. 22, para. 50 c); CM, p. 107, c).

¹⁷⁵ *Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, *Judgment*, *I.C.J. Reports 1997*, p. 56, para. 85. This quotation is relied on by Chile in its Memorial at para. 5.3. In most cases, it is upstream States whose actions are challenged for possible violations of international law in relation to alleged harm to a downstream State. However, if a downstream State were to follow the interpretation suggested above, it would effectively foreclose any future use of the transboundary watercourse by the upstream State. That foreclosure of use, in turn, could be deemed to cause harm to the upstream State by impeding that upper riparian from enjoying its right to use the waters in an equitable and reasonable manner. See S. Salman, "Downstream Riparians Can Also Harm Upstream Riparians: The Concept of Foreclosure of Future Uses", *Water International*, 2010, pp. 350-364.

124. In the Memorial, Chile admits that Bolivia equally has rights to reasonable and equitable use:

“(…) once the Silala River is held to be an international watercourse, shared by Bolivia and Chile, *each of those States* has this “basic right” and obligation of equitable and reasonable utilization of its waters.”¹⁷⁶

125. Equitable and reasonable utilization is a flexible principle not only because it is context-specific,¹⁷⁷ but also because it can change over time depending on new circumstances, needs, and uses of the international watercourse that riparian States may justify.

126. Indeed, according to Chile’s own interpretation, the equitable and reasonable nature of its current use of the waters of the Silala depends on the absence of counterpoised uses in Bolivia. As Chile asserts in its Memorial,

“In the absence of countervailing uses in Bolivia, it inevitably follows that all use by Chile, as downstream riparian State, of the 170 l/s flow of the Silala River that crosses the international boundary from Bolivia into Chile, has been, and cannot but be, equitable and reasonable vis-à-vis Bolivia.”¹⁷⁸

127. Moreover, if Bolivia were to exercise its right to a reasonable and equitable use of the naturally flowing waters of the Silala in the future, Chile would then not be

¹⁷⁶ CM, p. 93, para. 5.5 (emphasis added). See also CM, p. 92, para. 5.3: “[i]n accordance with the principle of equitable and reasonable utilization, Chile has the right to utilize the waters of the Silala and to be free from significant harm caused by Bolivia. *Chile also has corresponding obligations owed to Bolivia. Bolivia has the same rights*, as well as corresponding obligations owed to Chile” (emphasis added).

¹⁷⁷ BCM, para. 119.

¹⁷⁸ CM, p. 96, para. 5.13.

entitled to the entirety of its current use of the naturally flowing waters. Otherwise, Bolivia would effectively be impeded from using the naturally flowing waters of the Silala.

128. Interpreting Chile's request to the Court to mean that any future action taken by Bolivia would be unlawful if it negatively impacted the natural flow of water into Chile would be contrary to international law. As set out above,¹⁷⁹ this cannot be right.
129. In light of the above, Bolivia concludes with respect to the claims made by Chile in the Application and Memorial in relation to the equitable and reasonable use of the Silala waters that:
- a) Customary international rules on the use of international watercourses do not apply to the artificially-flowing Silala waters;
 - b) Bolivia and Chile are each entitled to the equitable and reasonable utilization of the naturally-flowing Silala waters in accordance with customary international law;
 - c) The current use of the naturally-flowing Silala waters by Chile is without prejudice to Bolivia's ongoing right to an equitable and reasonable use of these waters.

¹⁷⁹ BCM, para. 118.

C. Obligation of the Parties to Take Appropriate Measures to Prevent Significant Transboundary Environmental Harm

130. In its Submissions, Chile has asked the Court to adjudge and declare that “Bolivia has an obligation to take all appropriate measures to prevent and control pollution and other forms of harm to Chile resulting from its activities in the vicinity of the Silala River.”¹⁸⁰
131. Chile’s claim, however, is not consistent. In Chapter 5 of the Memorial, Chile advances a different, narrower claim, according to which “Bolivia is under an obligation to take all appropriate measures to prevent *the causing of significant harm* to Chile.”¹⁸¹ According to Chile, that obligation (“to prevent the causing of significant harm”) is based on the “rule enshrined in Article 7 of the UNWC” and applies to “States sharing an international watercourse.”¹⁸²
132. Chile also invokes “measures Bolivia must take to give full effect to article 7 of the UNWC.”¹⁸³ Yet, in another paragraph of the same section of the Memorial, Chile contends that Bolivia has an obligation to prevent “any other kind of harm in Chile”¹⁸⁴ and requests the Court to “reaffirm that Bolivia has an obligation to take all appropriate measures *to prevent and control pollution and other forms of harm to Chile* resulting from the activities in the vicinity of the Silala River.”¹⁸⁵ In addition, Chile invokes Article 7 of the UNWC to claim the existence of an obligation not to carry out activities “in the vicinity of the Silala” which may affect the quality of the

¹⁸⁰ Application, p. 22, para. 50 d); Memorial, p. 107, Submission d).

¹⁸¹ CM, p. 96, section C (emphasis added).

¹⁸² CM, p. 96, para. 5.14.

¹⁸³ CM, p. 97, para. 5.17.

¹⁸⁴ CM, p. 97, para. 5.16.

¹⁸⁵ CM, p. 97, para. 5.17 (emphasis added).

waters,¹⁸⁶ while said Article 7 only concerns significant harms resulting from the utilization of the international watercourse.

133. Chile's claim, as it is articulated in the Submissions of the Memorial, should be dismissed. Bolivia is not bound by the UNWC as such, but only by those provisions that reflect customary international law. In addition, the law on international watercourses only applies to the naturally-flowing waters of the Silala. Since the Silala springs and waters are part of an artificially enhanced watercourse, customary international rules on the use of international watercourses do not apply to the artificially flowing Silala waters.
134. Moreover, the 'no significant harm' principle applies under customary international law only to *significant* environmental harms and not, as Chile alleges in its Submissions, to "prevent and control pollution and other forms of harm" without qualifications. The 'no significant harm' principle is deeply rooted in international environmental law. In *Legality of the Threat or Use of Nuclear Weapons*, the Court applied to the environment the latin maxim *sic utere tuo ut alienum non laedas*¹⁸⁷ and asserted that:

"The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is

¹⁸⁶ CM, p. 97, paras. 5.16-5.17.

¹⁸⁷ The maxim reads as "Use your own property in such a way that you do not injure other people's" according to J. Law and E. A. Martin, *A Dictionary of Law*, 7th ed., Oxford University Press, 2014. An early decision of the Court referred to this maxim, although not in an environmental context: "It is every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States" (*Corfu Channel (United Kingdom v. Albania)*, Merits, Judgment, ICJ Reports 1949, p. 22).

now part of the corpus of international law relating to the environment.”¹⁸⁸

135. According to the Court, the scope and content of the rule is clear:

“As the Court restated in the *Pulp Mills* case, under customary international law, “[a] State is (...) obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State” (*I.C.J. Reports 2010 (I)*, p. 56, para. 101; see also *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, pp. 241-242, para. 29).”¹⁸⁹

136. All cases involving environmental questions before this Court over the past twenty years have referred to the ‘no significant harm’ rule as reflecting customary international law.¹⁹⁰

137. The obligation to prevent such significant harm is not absolute, it is a due diligence obligation couched in terms of taking “all appropriate measures.” According to the ILC:

“The obligation of due diligence contained in article 7 sets the threshold for lawful State activity (...) It is an obligation of conduct,

¹⁸⁸ *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996*, pp. 241-242, para. 29.

¹⁸⁹ *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, *I.C.J. Reports 2015*, pp. 711-712, para. 118.

¹⁹⁰ *Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, *I.C.J. Reports 1997*, pp. 67-68, para. 112; *Case concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment, *I.C.J. Reports 2010*, p. 78, para. 193; *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, *I.C.J. Reports 2015*, pp. 711-712, para. 118.

not an obligation of result. What the obligation entails is that a watercourse State whose use causes significant harm can be deemed to have breached its obligation to exercise due diligence so as not to cause significant harm only when it has intentionally or negligently caused the event which had to be prevented or has intentionally or negligently not prevented others in its territory from causing that event or has abstained from abating it.”¹⁹¹

138. The due diligence nature of the ‘no significant harm’ obligation was confirmed by the Court in *Pulp Mills*. In that case, the Court maintained that it was “an obligation to act with due diligence in respect of all activities which take place under the jurisdiction and control of each party.”¹⁹² Such an obligation is breached if a State “fail[s] to act diligently and thus take all appropriate measures to enforce its relevant regulations on a public or private operator under its jurisdiction.”¹⁹³ Evidence supporting the due diligence nature of the ‘no significant harm’ rule and its consequences can be found also in the ILC Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities.¹⁹⁴

¹⁹¹ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), p. 103, para. 4.

¹⁹² *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, *Judgment*, *I.C.J. Reports 2010*, p. 79, para. 197. The Court further clarifies that “[i]t is an obligation which entails not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators, to safeguard the rights of the other party.”

¹⁹³ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, *Judgment*, *I.C.J. Reports 2010*, p. 79, para. 197.

¹⁹⁴ “The obligation of the State of origin to take preventive or minimization measures is one of due diligence. It is the conduct of the State of origin that will determine whether the State has complied with its obligation under the present articles. The duty of due diligence involved, however, is not intended to guarantee that significant harm be totally prevented, if it is not possible to do so. In that eventuality, the State of origin is required, as noted above, to exert its best possible efforts to minimize the risk. In this sense, it does not guarantee that the harm would not occur.” *Commentary to Draft Article 3, para. 7, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, U.N. Doc A/56/10, *Yearbook of the International Law Commission*, 2001, Vol. II, Part Two, p. 154.

139. In conclusion, only the use of the naturally flowing waters of the Silala is regulated by customary international law on the use of international watercourses. The ‘no significant harm’ principle under customary international law only applies to *significant* harm. This principle applies to both States. Bolivia accordingly requests the Court to dismiss Chile’s claim and to declare that Bolivia and Chile each have an obligation under customary international law to take all appropriate measures to prevent the causing of significant transboundary environmental harm.

CHAPTER 5

ABSENCE OF BREACH OF THE OBLIGATION TO NOTIFY AND CONSULT

140. In its Memorial, Chile alleges that Bolivia violated the procedural obligations to provide Chile with timely notification of any planned measures which may have an adverse effect on the shared water resource and to exchange data and information in relation to these measures.¹⁹⁵ Chile's submission requests the Court to declare that "Bolivia has breached (...) its obligations to notify and consult" without asking for any other remedies.¹⁹⁶ In this Chapter, Bolivia will demonstrate that Chile did not establish such a breach.

A. Bolivia Replied to Chile's Requests on Matters Regarding the Silala Waters

141. According to Chile, "Bolivia has announced certain measures including in May 2012 the construction of a fish farm, a dam and a mineral water bottling plant while, more recently, it has constructed ten houses close to the river."¹⁹⁷ It continues:

¹⁹⁵ In summarizing its claims in the Memorial, Chile describes "the legal consequences that flow from the status of the Silala River as an international watercourse." It identifies one of those consequences as follows: "The third consequence is that Bolivia is also subject to a series of procedural obligations. It has an obligation to cooperate and *to provide Chile with timely notification of any planned measures which may have an adverse effect on the shared water resource, to exchange data and information and to conduct, where appropriate an environmental impact assessment*, in order to enable Chile to evaluate the possible effects of any such planned measures (...)" (CM, pp. 8-9, para. 1.17, c)) (emphasis added). In its Submissions, Chile asserts under Submission e) that: "Bolivia has an obligation to cooperate and to provide Chile with timely notification of planned measures which may have an adverse effect on shared water resources, to exchange data and information and to conduct where appropriate an environmental impact assessment, in order to enable Chile to evaluate the possible effects of such planned measures. *Obligations that Bolivia has breached so far as concerns its obligation to notify and consult Chile with respect to activities that may affect the waters of the Silala River or the utilization thereof by Chile*" (CM, p. 107, Submission e)) (emphasis added).

¹⁹⁶ CM, p. 107, Submission e). At p. 6, paras. 1.13 and p. 105, paras. 6.1-6.2 of the Memorial, Chile mentions reparation and restitution. But it then indicates (para. 6.1) that it considers that its rights "will be adequately protected by a series of declaratory orders."

¹⁹⁷ CM, p. 10, para. 1.17 c).

“Given the relatively low flow of the Silala River, and its location in such an arid area, such measures might readily have an adverse effect on the shared water resource. However, although Chile has repeatedly sought information from Bolivia as to the nature and extent of the measures announced and has specifically sought information with respect to the use of the river for sanitary arrangements with respect to the recent new constructions, Bolivia has provided no substantive response.”¹⁹⁸

142. In the same paragraph, Chile specifies:

“Until such time as Bolivia provides information showing the absence of risk of adverse impact and/or confirmation that the announced measures will not in fact proceed, Chile considers that Bolivia is in breach of its procedural obligations and seeks a declaration accordingly.”¹⁹⁹

143. Chile maintains in its Memorial that on 7 May 2012 it requested information from Bolivia but that Bolivia never replied.²⁰⁰ This is not correct. Chile omits to mention that in a Note Verbale dated 24 May 2012, Bolivia responded that “the Government of Chile is once again invited to carry out a joint visit to that region.”²⁰¹ In concluding its Note, Bolivia stated that “in accordance with a culture of dialogue (...) [it] expresses its willingness to continue exploring the necessary instances that lead to a common understanding to continue moving forward in the treatment of the matter.”²⁰²

¹⁹⁸ CM, p. 10, para. 1.17 c).

¹⁹⁹ CM, p. 10, para. 1.17 c).

²⁰⁰ CM, p. 98, para. 5.19.

²⁰¹ Note No VRE-DGRB-UAM-009901/2012 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 24 May 2012, **BCM, Vol. 2, Annex 12.**

²⁰² Note No VRE-DGRB-UAM-009901/2012 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 24 May 2012, **BCM, Vol. 2, Annex 12.**

144. Chile itself acknowledges this reply when on 9 October 2012 Chile accepts this invitation and expressed its wish to “concretize this activity as soon as possible,” indicating the need for agreement on the dates, delegation members and their mandate.²⁰³ Contrary to what Chile alleges, Bolivia again responded by Note Verbale of 25 October 2012 stating:

“With respect to the invitation of 13 September 2011, made by the Government of the Plurinational State of Bolivia to carry out a “Joint Visit” to said region, the Ministry of Foreign Affairs deems that it should be coordinated and planned with the “Chile-Bolivia Political Consultations Mechanism”, wherein this matter can be jointly pursued.”²⁰⁴

145. It should be noted that at this time the Parties were already in disagreement on the nature of the Silala waters²⁰⁵ and had already agreed, in particular in 2004, to proceed to joint studies and to discuss the matter in order “to determine the nature, origin and flow of the waters of the Silala.”²⁰⁶ As Chile points out in the Memorial, Bolivia’s position at that time, as expressed in the letters responding to Chile’s request for information, was that the waters of the Silala as a whole do not qualify as an international watercourse.²⁰⁷

²⁰³ Note N° 389/149 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 9 October 2012, **CM, Vol. 2, Annex 35**.

²⁰⁴ Note N° VRE-DGRB-UAM-020663/2012 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 25 October 2012, **CM, Vol. 2, Annex 36**.

²⁰⁵ BCM, paras. 26-37.

²⁰⁶ CM, p. 46, para. 3.22. In the two letters of May and October 2012 through which Chile requested information, Chile reaffirmed the need “to continue developing studies, field observations and joint works related to” the waters of the Silala (Annex 34) and called for “a future visit to carry out field observations and schedule joint works” (Annex 35). See Note N° 199/39 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 7 May 2012, **CM, Vol. 2, Annex 34**; Note N° 389/149 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 9 October 2012, **CM, Vol. 2, Annex 35**.

²⁰⁷ CM, pp. 47-48, paras. 3.27-3.29 and p. 98, para. 5.20.

146. It should be emphasized that, even though both Parties disagreed on the status and nature of the waters, Bolivia in response to Chile's requests for information repeatedly stated in various Notes Verbales sent to Chile between January 2013 and April 2014, that:

“(…) in accordance with the *culture of dialogue* that characterises the Plurinational State of Bolivia, the Ministry of Foreign Affairs expresses *its predisposition to begin conversations about this and other bilateral topics* through the Political Consultations Mechanism that was agreed by our Governments.”²⁰⁸

147. It is thus not true to allege, as Chile does, that Bolivia repeatedly “fail[s] to respond to requests from Chile for information.”²⁰⁹ This is simply incorrect. In addition, Bolivia's proposal was consistent with the view that it is necessary “to create the conditions for successful co-operation between the parties.”²¹⁰ Chile never replied to Bolivia on this issue.²¹¹

²⁰⁸ Note N° VRE-DGLF-UMA-000715/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 17 January 2013, **CM, Vol. 2, Annex 37.2** (emphasis added). See also Note N° VRE-DGLF-UMA-008107/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 9 May 2013, **CM, Vol. 2, Annex 37.4**; Note N° VRE-DGLF-UMA-017599/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 2 October 2013, **CM, Vol. 2, Annex 37.6**; Note N° VRE-DGLF-UMA-020899/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 19 November 2013, **CM, Vol. 2, Annex 37.8**; Note N° VRE-DGLF-UMA-022856/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 16 December 2013, **CM, Vol. 2, Annex 37.10**; Note N° VRE-DGLFAIT-UAIT-Nv-7/2014 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 19 February 2014, **CM, Vol. 2, Annex 37.12**; and Note N° VRE-DGLFAIT-UAIT-Cs-136/2014 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 10 April 2014, **CM, Vol. 2, Annex 38.2**.

²⁰⁹ CM, p. 103, paras. 5.31-5.32.

²¹⁰ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, *I.C.J. Reports 2010*, p. 58, para. 113; see also p. 59, para. 115.

²¹¹ Note N° 003933 from the Ministry of Foreign Affairs of Chile to the General Consulate of Bolivia in Santiago, 9 April 2013, **CM, Vol. 2, Annex 37.3**; Note N° 269/134 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 25 September 2013, **CM, Vol. 2,**

148. Further, as set out above,²¹² the relevant scientific studies that both Parties have submitted in the course of the present proceedings demonstrate that the waters of the Silala constitute an artificially enhanced watercourse. The procedural obligations to notify and consult are only applicable to the naturally-flowing Silala waters, according to customary international law. They do not apply to the artificially-flowing waters, unless an agreement to this effect exists between the Parties. In the present case, no such agreement exists between Bolivia and Chile. Even if these procedural obligations were considered as being applicable to the Silala waters as a whole, as will be shown below, it is manifest that Bolivia did not breach any alleged obligations.

149. Bolivia has always expressed its willingness to cooperate, even in circumstances that involved the use of the waters of an artificially enhanced watercourse. In its Memorial, Chile states that “Bolivia has recently adopted the position that the Silala is not an international watercourse and that it therefore has no obligation to cooperate with Chile in managing and utilizing its waters.”²¹³ However, official correspondence shows otherwise.²¹⁴

Annex 37.5; Note N° 323/157 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 29 October 2013, **CM, Vol. 2, Annex 37.7**; Note N° 362/180 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 28 November 2013, **CM, Vol. 2, Annex 37.9**; and Note N° 63/51 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 12 February 2014, **CM, Vol. 2, Annex 37.11**.

²¹² BCM, para. 42.

²¹³ CM, p. 101, para. 5.26.

²¹⁴ Notes Verbales sent to Chile between January 2013 and April 2014, state that:

“(…) in accordance with the *culture of dialogue* that characterises the Plurinational State of Bolivia, the Ministry of Foreign Affairs expresses *its predisposition to begin conversations about this and other bilateral topics* through the Political Consultations Mechanism that was agreed by our Governments.” Note N° VRE-DGLF-UMA-000715/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 17 January 2013. (emphasis added) **CM Annex 37.2**. See also Note N° VRE-DGLF-UMA-008107/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 9 May 2013, **CM, Vol. 2, Annex 37.4**; Note N° VRE-DGLF-UMA-017599/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 2 October 2013, **CM, Vol. 2, Annex 37.6**; Note N° VRE-DGLF-UMA-

B. Bolivia did not Breach the Obligation to Provide Timely Notification of Planned Measures in the Silala

150. Although Chile invokes in Chapter 5 of its Memorial the procedural obligations to provide Chile with timely notification of planned measures, to exchange data and information and to conduct an environmental impact assessment, the only alleged violation of a procedural duty that Chile substantiates concerns an obligation to provide timely notification of planned measures. Moreover, in Chapter 6 of Chile's Memorial, where it articulates its submissions, it simply requests from the Court "a declaration with respect to a breach by Bolivia of its obligations *of notification and consultation*."²¹⁵
151. In relation to the duty to provide timely notification of, and to consult on, planned measures, Chile claims that this obligation applies to "the construction of a fish farm, a weir, and a mineral water bottling plant"²¹⁶ and "the recent construction of ten houses near the Bolivian Military Post."²¹⁷ According to Chile's submission e), "Bolivia has breached (...) its obligation to notify and consult Chile with respect to activities that may affect the waters of the Silala River or the utilization thereof by Chile."²¹⁸

020899/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 19 November 2013, **CM, Vol. 2, Annex 37.8**; Note N° VRE-DGLF-UMA-022856/2013 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 16 December 2013, **CM, Vol. 2, Annex 37.10**; Note N° VRE-DGLFAIT-UAIT-Nv-7/2014 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 19 February 2014, **CM, Vol. 2, Annex 37.12**; and Note N° VRE-DGLFAIT-UAIT-Cs-136/2014, from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 10 April 2014, **CM, Vol. 2, Annex 38.2**.

²¹⁵ CM, p. 106, para. 6.6 (emphasis added).

²¹⁶ CM, p. 98, para. 5.19.

²¹⁷ CM, p. 99, para. 5.21.

²¹⁸ CM, p. 107, Submission e).

152. By referring to the obligation to “notify and consult,” Chile seems to refer to, and conflate, the obligations set out in Articles 11²¹⁹ and 12²²⁰ of the UNWC on information concerning planned measures. Chile’s Memorial relies and expands on the content of both Articles, considering that the duty to “notify and consult (...) is set out in detail in articles 11 to 18 of the UNWC.”²²¹
153. Considering that neither Bolivia nor Chile are Parties to this Convention, Articles 11 and 12 only apply to the extent that these provisions reflect customary international law. As explained below, Article 12 reflects customary international law, but Article 11 does not.
154. The duty under Article 11 is broader than the notification obligation under Article 12 of the UNWC. Article 11 concerns any “(...) possible effects of planned measures on the condition of an international watercourse.” In interpreting what became Article 11, the International Law Commission explained that “[t]he expression ‘possible effects’ includes all potential effects of planned measures, whether adverse or beneficial.”²²² In addition, the language of the provision indicates that the “effect” must be “on the condition of an international watercourse” and not necessarily to any particular riparian State. As such, it requires notification,

²¹⁹ Art. 11 of the UNWC reads:

“Watercourse States shall exchange information and consult each other and, if necessary, negotiate on the possible effects of planned measures on the condition of an international watercourse.”

²²⁰ Art. 12 of the UNWC reads:

“Before a watercourse State implements or permits the implementation of planned measures which may have a significant adverse effect upon other watercourse States, it shall provide those States with timely notification thereof. Such notification shall be accompanied by available technical data and information, including the results of any environmental impact assessment, in order to enable the notified States to evaluate the possible effects of the planned measures.”

²²¹ CM, pp. 101-102, paras. 5.27-5.28. Article 18 of the UNWC concerns the procedure applicable in relation to notifications under Article 12.

²²² *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), p. 111, Commentary 3 to Article 11.

consultation, and exchange of information about *all* possible positive and negative effects of planned measures that a State is contemplating and not only about “significant adverse effects” as is the case under Article 12.²²³

155. In sharp contrast with the ILC Commentaries on Article 12,²²⁴ the Commentaries on Article 11 make no reference to the status of the obligation under Article 11 in customary international law. Following an extensive analysis of State practice and case-law on the obligation to notify and consult, the fourth Special Rapporteur on the topic at the ILC concluded that there exists “a widespread practice of States of agreeing to notify and consult with other States with regard to proposed uses that could *significantly* affect the other States’ use of or interest in an international watercourse.”²²⁵ Surely, agreements may adopt a lower standard, but in light of State practice and case-law adopting the “significant adverse effect” standard, the conclusion of the Special Rapporteur reflects the position under customary international law.²²⁶ Article 11 is therefore not applicable in the present case.

²²³ During the negotiations of the 1997 Convention, Chile stressed that Article 12 only applies to “significant adverse effects”. See United Nations, Sixth Committee, Summary Record of the 53rd meeting, 31 March 1997, A/C.6/51/SR.53, p. 8, para. 47: “Mr. SALINAS (Chile) said that his delegation had no objections regarding the text of article 12, although the title did not match the content. Therefore, he suggested that ‘significant’ should be inserted before ‘adverse effects’”. At p. 9, para. 53: “Mr. SALINAS (Chile) said that the Netherlands proposal did not agree exactly with the content of the articles. Article 11 referred to planned measures without qualifying the possible adverse effects, while article 12 stipulated the obligation to give notification of planned measures that might have a significant adverse effect. Therefore, he maintained his proposal that ‘significant’ should be added to the title [of article 12]”. **BCM, Vol. 2, Annex 2.**

²²⁴ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), pp. 112-113, Commentaries 6-13 to Article 12.

²²⁵ *Third report on the law of the non-navigational uses of international watercourses*, Mr. Stephen C. McCaffrey, Special Rapporteur, A/CN.4/406 and Corr.1 and Add.1 & 2, *Yearbook of the International Law Commission*, 1987, Vol. II (Part One), p. 30, para. 72 (emphasis added).

²²⁶ *Third report on the law of the non-navigational uses of international watercourses*, Mr. Stephen C. McCaffrey, Special Rapporteur, A/CN.4/406 and Corr.1 and Add.1 & 2, *Yearbook of the International Law Commission*, 1987, Vol. II (Part One), pp. 28-35, paras. 60-87. See also the

156. Article 12 of the UNWC concerns planned measures that may have a significant adverse effect upon other watercourse riparians. As noted above, this obligation is widely acknowledged to be a principle of customary international law. The ILC surveyed numerous examples in which the principle has been incorporated into treaties, recognized by international bodies and conferences, adopted in codification works, and addressed in judicial decisions.²²⁷ Moreover, as Chile points out in its Memorial, the ICJ in the *Pulp Mills* case noted that the obligation to notify is “an essential part of the process leading the parties to consult in order to assess the risks of the plan and to negotiate possible changes which may eliminate those risks or minimize their effects.”²²⁸
157. In presenting this provision, and specifically the notion of “significant adverse effect,” which limits its scope of application, the ILC asserted that “[t]he threshold established by this standard is intended to be lower than that of ‘significant harm’ under article 7.”²²⁹ Both obligations are triggered only when the possible effect is negative. The “trigger” for the “may have” determination has to be evaluated before the activity is authorized or implemented.

practice assessed in the *Third report on the law of the non-navigational uses of international watercourses*, Mr. Stephen M. Schwebel, Special Rapporteur, A/CN.4/348. *Yearbook of the International Law Commission*, 1982, Vol. II (Part One), pp. 105-110, paras. 170-186.

²²⁷ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), pp. 112-113, Commentaries 6-12 to Article 12.

²²⁸ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, I.C.J. Reports 2010, p. 59, para. 115; see also CM, p.102, para. 5.29.

²²⁹ *Report of the Commission to the General Assembly on the Work of its Forty-Sixth Session, The Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/49/10, *Yearbook of the International Law Commission*, 1994, Vol. II (Part Two), p. 111, Commentary 2 to Article 12.

C. No Risk of Significant Adverse Effects by the Works at the Silala

158. It is only when a proper analysis of the basis of Chile's claims is made within the context of the specifics of the Silala waters, that their artificiality becomes clear. For instance, the construction of a fish farm never went forward beyond a failed experimental stage. Regarding the possible constructions of a weir, and a mineral water bottling plant, the obligation clearly was not triggered because those proposed activities were never taken forward. The Memorial of Chile itself refers to these activities as mere "projects in the Silala area that had been announced by the governor of the Department of Potosi," without mentioning that their consideration went beyond contemplation.²³⁰ As for the construction of ten houses near the Bolivian Military Post, in the planning of their construction it was evident that there would be no significant adverse effect on Chile, and Chile has offered no evidence of actual harm resulting from the project beyond a plain exaggeration to construct its claims concerning the alleged breach.

159. In any event, Bolivia communicated to Chile the relevant information and the reasons why there was no risk that significant adverse effect might be caused to Chile or the waters of the Silala as a result of the construction of ten houses near the Bolivian Military Post. In a Diplomatic Note dated 7 February 2017, Chile requested from Bolivia:

“(...) information regarding the utilization of water of the Silala River water system, as a consequence of the construction and operation of the military base called “Silala Military Post” as well as the ten houses built in the proximities of said watercourse.”²³¹

²³⁰ CM, p. 98, para. 5.19.

²³¹ Note N° 29/17 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 7 February 2017. **CM, Vol. 2, Annex 39.1**. It should be noted that in this note of 7 February 2017, Chile cites the “construction” of the Silala Military Post even though this Post had by then been

160. Specifically, the General Consulate requested information about the water supply, as well as the disposal system of the wastewater from the above-mentioned infrastructure works, on the ground that the potential uses of water of the system and the discharge of wastewater therein, may have significant consequences on the rights and legitimate interests that Chile has in the Silala.²³²

161. Bolivia responded with a Diplomatic Note dated 24 March 2017 stating that:

“On that matter and in the context of the principles of good faith and neighbourliness, the Ministry communicates that as soon as the requested information is available it will let the Honourable General Consulate know.”²³³

162. Only two months later, on 25 May 2017, Bolivia sent Chile another Diplomatic Note stating:

“(…) the Ministry of Foreign Affairs indicates that the scarce Bolivian infrastructure that exists at the site *does not constitute any danger* that would generate pollution or affects the water quality of the Silala springs, given that the houses built are uninhabited.

With regard to the Military Post, *appropriate mechanisms that ensure the preservation and conservation* of the aforementioned waters have been provided, since they are a permanent concern of Bolivia. Therefore the use of the waters is minimal and the disposal

in place for over a decade, since 2006, without ever leading to any request for information in regard to the Silala waters.

²³² Note N° 29/17 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 7 February 2017. **CM, Vol. 2, Annex 39.1.**

²³³ Note VRE-Cs-47/2017 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 24 March 2017. **CM, Vol. 2, Annex 39.2.**

thereof is controlled through a system of basic sanitation that prevents contamination in the area.”²³⁴

163. This correspondence evidences that there was no risk of “a significant adverse effect upon other watercourse States” under the rule reflected in Article 12 of the UNWC. Consequently, the obligation contained in Article 12 was never triggered. In any case, Bolivia provided Chile with the relevant information about the characteristics of the ten houses and the Military Post through the above-mentioned Diplomatic Note dated 25 May 2017.²³⁵

D. Final Remarks

164. In light of the above, Chile’s claim that Bolivia breached its obligations “to notify and consult” should be dismissed. Chile has been unable to demonstrate not only the lack of exchanges, but also the alleged unwillingness on the part of Bolivia to enter into dialogue and cooperate with each other.

²³⁴ Note VRE-Cs-117/2017 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 25 May 2017. **CM, Vol. 2, Annex 39.3** (emphasis added).

²³⁵ Note VRE-Cs-117/2017 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 25 May 2017. **CM, Vol. 2, Annex 39.3**.

CHAPTER 6
COUNTER-CLAIMS

165. In accordance with Article 80 of the Rules of Court, Bolivia submits three Counter-Claims. As Bolivia will show, these Counter-Claims come under the jurisdiction of the Court and are directly connected with the subject-matter of Chile's claims. For the reasons set out in this Chapter, Bolivia asks the Court to adjudge and declare that:

- a) Bolivia has sovereignty over the artificial channels and drainage mechanisms in the Silala that are located in its territory and therefore has the right to decide whether and how to maintain them;
- b) Bolivia has sovereignty over the artificial flow of Silala waters engineered, enhanced, or produced in its territory, and Chile has no right to that artificial flow; and
- c) Any delivery from Bolivia to Chile of artificially-flowing waters of the Silala, and the conditions and modalities thereof, including the compensation to be paid for said delivery, are subject to the conclusion of an agreement with Bolivia.

A. Bolivia's Counter-Claims Fall within the Jurisdiction of the Court

166. According to Article 80, paragraph 1, of the Rules of Court, the Court "may entertain a counter-claim only if it comes within the jurisdiction of the Court." The jurisdiction of the Court in the present case is based on Article XXXI of the Pact of Bogotá,²³⁶ to which both States are Parties. There is no doubt that Bolivia's

²³⁶ BCM, para. 1, and CM, pp. 5-6, paras. 1.10-1.13.

Counter-Claims come within the jurisdiction of the Court under that provision. They are “questions of international law” through which Bolivia asks the Court to identify rights and obligations of the Parties under customary international law in relation to the artificial channels and drainage mechanisms and the artificial flow of waters of the Silala.

B. Admissibility of Bolivia’s Counter-Claims

167. The Court may entertain Counter-Claims only if they are admissible under Article 80 of the Rules of the Court. According to the Court, two conditions have to be met for that purpose. First, Counter-Claims must pursue “objectives other than the mere dismissal of the claim of the Applicant in the main proceedings,”²³⁷ i.e. they must constitute “a separate ‘claim’, that is to say an autonomous legal act the object of which is to submit a new claim to the Court.”²³⁸ Second, under Article 80, paragraph 1, of the Rules of Court, they must be “directly connected with the subject-matter of the claim of the other Party.” Both conditions are fulfilled in the present case.

168. First, Bolivia’s Counter-Claims are “distinguishable from a defense on the merits.”²³⁹ Bolivia asks for something more than the mere rejection of Chile’s claims. While in its submissions Chile addresses its own rights under international customary rules applicable to international watercourses, Bolivia’s Counter-Claims concern Bolivia’s rights under customary international rules applicable to waters and their flow, and its rights in respect to artificial infrastructure, including artificial

²³⁷ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, Counter-Claims, Order of 17 December 1997, I.C.J. Reports 1997, p. 256, para. 27.

²³⁸ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, Counter-Claims, Order of 17 December 1997, I.C.J. Reports 1997, p. 256, para. 27.

²³⁹ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, Counter-Claims, Order of 17 December 1997, I.C.J. Reports 1997, p. 256, para. 27.

channels and drainage mechanisms in Bolivia's own territory, that are not governed by the law on international watercourses.

169. Second, Bolivia's Counter-Claims are directly connected, "both in fact and in law,"²⁴⁰ to Chile's Application.

170. According to the Court's jurisprudence,

"It is for the Court to assess 'whether the counter-claim is sufficiently connected to the principal claim, taking account of the particular aspects of each case' (see *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Counter-Claims, Order of 18 April 2013, *ICJ Reports 2013*, pp. 211-212, para. 32)."²⁴¹

171. In the present case, Chile's claims and Bolivia's Counter-Claims "relate to the same factual complex, including the same geographical area or the same time period."²⁴² They both seek a declaratory judgment concerning rights and obligations relating to the waters of the Silala and its artificial installations. They also concern "similar types of conduct."²⁴³ They concern conduct in relation to the status and use of the waters of the Silala and of the corresponding artificial channels and drainage

²⁴⁰ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, Counter-Claims, Order of 17 December 1997, I.C.J. Reports 1997, p. 258, para. 33.

²⁴¹ *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Counter-Claims, Order of 15 November 2017, I.C.J. Reports 2017, p. 296, para. 22.

²⁴² *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Counter-Claims, Order of 15 November 2017, I.C.J. Reports 2017, p. 297, para. 24.

²⁴³ *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Counter-Claims, Order of 15 November 2017, I.C.J. Reports 2017, p. 297, para. 24.

mechanisms. In addition, both Parties pursue “the same legal aim,”²⁴⁴ that is to say the identification of the legal rules applicable under customary international law to the Silala waters and their flow, and to the artificial installations in and around the Silala springs.

172. In light of the above, there is no doubt that a decision of the Court on Bolivia’s Counter-Claims within the context of the present proceedings will “ensure better administration of justice” by enabling the Court “to have an overview of the respective claims of the parties and to decide them more consistently.”²⁴⁵

C. Bolivia’s Counter-Claims

173. Bolivia’s Counter-Claims are based on the factual and legal conclusions drawn in the previous Chapters of this Counter-Memorial.

174. In Chapter 2, Bolivia showed that artificial channels and drainage mechanisms have been constructed in Bolivia’s territory by a foreign company.²⁴⁶ As Chile notes in its Memorial, these artificial installations were built and are located “on” or “in” Bolivian territory.²⁴⁷ As there is no agreement between Bolivia and Chile in relation to the construction, maintenance or operation of the artificial installations located in Bolivia, and since under customary international law there is no obligation for a State to maintain artificial channels and drainage mechanisms within its territory for

²⁴⁴ *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Counter-Claims, Order of 15 November 2017, I.C.J. Reports 2017, p. 297, para. 25.

²⁴⁵ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, Counter-Claims, Order of 17 December 1997, I. C. J. Reports 1997, p. 257, para. 30.

²⁴⁶ BCM, paras. 48-49.

²⁴⁷ CM, pp. 87-88, paras. 4.59-4.61.

the benefit of other States,²⁴⁸ Bolivia has the right to decide whether and how to maintain the artificial channels and drainage mechanisms in Bolivian territory.²⁴⁹

175. In the exercise of this prerogative, following a recent report by the Ramsar Convention Secretariat, Bolivia may assess the convenience of adopting appropriate actions involving the artificial channels and drainage mechanisms aimed at preserving or restoring the *bofedales* of the Silala, in particular considering their documented state of vulnerability.
176. The Silala wetlands in Bolivia have been identified as part of a Ramsar site and have been designated for protection in accordance with the Ramsar Convention.²⁵⁰ As shown in Chapter 2 of this Counter-Memorial, the artificial channels and drainage network of the Silala substantially affected and degraded the *bofedales* and caused the wetlands to recede and decline.²⁵¹ According to the 2018 Report of the Ramsar Convention Secretariat on the Ramsar Site Los Lipez in Bolivia,

“[t]he wetlands found in the Silala area have been highly affected by the construction of the water-catchment canals started in 1908. At present, there are only vestiges of the original wetlands that used to cover an area of about 141,200 m², or 14.1 hectares. The current surface area of the wetlands covers only about 6,000 m², or 0.6 ha.,

²⁴⁸ BCM, para. 83.

²⁴⁹ BCM, para. 106.

²⁵⁰ Ramsar Convention Secretariat, *Report Ramsar Advisory Mission N° 84, Ramsar Site Los Lipez, Bolivia*, 2018. **BCM, Vol. 5, Annex 18**. The Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, 2 February 1971 (UNTS 1976, No. 14583, p. 246), is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. A Ramsar site is a wetland that has been designated of international importance. Parties to the Ramsar Convention commit to provide special protections under domestic law to Ramsar sites.

²⁵¹ BCM, paras. 71-74.

which are surrounded by the water catchment works and artificial canals.”²⁵²

177. It was in this context that said Secretariat concluded in the aforementioned Report that the deterioration of the Silala Valley *bofedales* is derived from the construction of the water diversion channels initiated in 1908.²⁵³

178. The Bolivian *bofedales* are heavily dependent on the waters of the Silala and are vulnerable to changing climatic and other conditions.²⁵⁴ In the Guidelines for the allocation and management of water resources in order to maintain the ecological functions of wetlands adopted in 2002, the Conference of the Contracting Parties to the Ramsar Convention observed in particular that:

“Insufficient water reaching wetlands, due to abstractions, storage and diversion of water for public supply, agriculture, industry and hydropower, is *a major cause of wetland loss and degradation*. A key requirement for wetland conservation and wise use is to ensure that adequate water of the right quality is allocated to wetlands at the right time.”²⁵⁵

179. Accordingly, the Conference considered that “[t]o maintain the natural ecological character of a wetland, it is necessary to allocate water as closely as possible to the natural regime”²⁵⁶ and that “[f]lows should normally follow the natural regime as

²⁵² Ramsar Convention Secretariat, *Report Ramsar Advisory Mission N° 84, Ramsar Site Los Lipez, Bolivia*, 2018, p. 38. **BCM, Vol. 5, Annex 18.**

²⁵³ Ramsar Convention Secretariat, *Report Ramsar Advisory Mission N° 84, Ramsar Site Los Lipez, Bolivia*, 2018, p. 39. **BCM, Vol. 5, Annex 18.**

²⁵⁴ BCM, para. 52.

²⁵⁵ Resolution VIII.1, Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands, Annex, para. 2, Ramsar COP8, Valencia, Spain, 18-26 November 2002 (emphasis added).

²⁵⁶ Resolution VIII.1, Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands, Annex, para. 5, Ramsar COP8, Valencia, Spain, 18-26 November 2002.

closely as possible to maintain the natural ecology.”²⁵⁷ In the case of the Silala, Bolivia may have to modify the artificial channels and drainage mechanisms which are located in its territory in order to fulfill that goal.

180. By virtue of Bolivia’s sovereignty over the artificial flow of Silala waters, any delivery from Bolivia to Chile of artificially-flowing waters of the Silala, and the conditions and modalities thereof, including the compensation to be paid for said delivery, are subject to the conclusion of an agreement with Bolivia.

181. Bolivia therefore requests the Court to adjudge and declare that:

- a) Bolivia has sovereignty over the artificial channels and drainage mechanisms in the Silala that are located in its territory and has the right to decide whether and how to maintain them;
- b) Bolivia has sovereignty over the artificial flow of Silala waters engineered, enhanced, or produced in its territory and Chile has no right to that artificial flow; and
- c) Any delivery from Bolivia to Chile of artificially-flowing waters of the Silala, and the conditions and modalities thereof, including the compensation to be paid for said delivery, are subject to the conclusion of an agreement with Bolivia.

²⁵⁷ Resolution VIII.1, Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands, Annex, para. 28, Ramsar COP8, Valencia, Spain, 18-26 November 2002.

SUBMISSIONS

1. Bolivia respectfully asks the Court to dismiss and reject the requests and submissions of Chile and to adjudge and declare that:
 - a) The waters of the Silala springs are part of an artificially enhanced watercourse;
 - b) Customary international rules on the use of international watercourses do not apply to the artificially-flowing Silala waters;
 - c) Bolivia and Chile are each entitled to the equitable and reasonable utilization of the naturally-flowing Silala waters, in accordance with customary international law;
 - d) The current use of the naturally-flowing Silala waters by Chile is without prejudice to Bolivia's right to an equitable and reasonable use of these waters;
 - e) Bolivia and Chile each have an obligation to take all appropriate measures to prevent the causing of significant transboundary environmental harm in the Silala;
 - f) Bolivia and Chile each have an obligation to cooperate and provide the other State with timely notification of planned measures which may have a significant adverse effect on naturally-flowing Silala waters, exchange data and information and conduct where appropriate environmental impact assessments;
 - g) Bolivia did not breach the obligation to notify and consult Chile with respect to activities that may have a significant adverse effect upon the naturally-flowing Silala waters or the lawful utilization thereof by Chile.

2. As to Bolivia's Counter-Claims, Bolivia respectfully requests the Court to adjudge and declare that:
 - a) Bolivia has sovereignty over the artificial channels and drainage mechanisms in the Silala that are located in its territory and has the right to decide whether and how to maintain them;
 - b) Bolivia has sovereignty over the artificial flow of Silala waters engineered, enhanced, or produced in its territory and Chile has no right to that artificial flow;
 - c) Any delivery from Bolivia to Chile of artificially-flowing waters of the Silala, and the conditions and modalities thereof, including the compensation to be paid for said delivery, are subject to the conclusion of an agreement with Bolivia.
3. The present submissions are without prejudice to any other claim that Bolivia may formulate in relation to the Silala waters.

The Hague, 3 September 2018

Eduardo RODRÍGUEZ VELTZÉ
Agent of the Plurinational State of Bolivia

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CERTIFICATION

I certify that the annexes and reports filed with this Counter-Memorial are true copies of the documents referred to and that the translations provided are accurate.

Eduardo RODRÍGUEZ VELTZÉ

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