

PACIFIC ISLANDS FORUM SECRETARIAT

WRITTEN STATEMENT

TO THE

INTERNATIONAL COURT OF JUSTICE

OBLIGATIONS OF STATES IN RESPECT OF CLIMATE CHANGE (REQUEST FOR ADVISORY OPINION)

March 2024

Contents

A.	INTRODUCTION		
B.	SCOPE4		
C.	CONTEXT4		
D.	CLIMATE CHANGE-RELATED SEA-LEVEL RISE		.5
	(1)	2021 PACIFIC ISLANDS FORUM DECLARATION ON PRESERVING MARITIME ZONES IN THE FACE OF CLIMATE CHANGE-RELATED SEA-LEVEL RISE, 6 AUGUST 2021	.7
	(2)	2023 PACIFIC ISLANDS FORUM DECLARATION ON THE CONTINUITY OF STATEHOOD AND THE PROTECTION OF PERSONS IN THE FACE OCLIMATE CHANGE-RELATED SEA-LEVEL RISE, 9 NOVEMBER 2023	F
		Statehood	.9
		Protection of persons	.9
		Cooperation and a call upon the international community	0
E.	FIN	FINAL REMARKS10	
CERT	IFIC.	ATION	1
LIST (OF A	NNEXES1	2



PACIFIC ISLANDS FORUM SECRETARIAT

OBLIGATIONS OF STATES IN RESPECT OF CLIMATE CHANGE (REQUEST FOR ADVISORY OPINION)

March 2024

A. INTRODUCTION

1. On 29 March 2023, the United Nations General Assembly adopted resolution A/RES/77/276 in which the General Assembly decided, in accordance with Article 96 of the Charter of the United Nations, to request the International Court of Justice to render an advisory opinion pursuant to Article 65 of the Statute of the Court, on the following question:

"Having particular regard to the Charter of the United Nations, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the United Nations Framework Convention on Climate Change, the Paris Agreement, the United Nations Convention on the Law of the Sea, the duty of due diligence, the rights recognized in the Universal Declaration of Human Rights, the principle of prevention of significant harm to the environment and the duty to protect and preserve the marine environment,

- (a) What are the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from anthropogenic emissions of greenhouse gases for States and for present and future generations?
- (b) What are the legal consequences under these obligations for States where they, by their acts and omissions, have caused significant harm to the climate system and other parts of the environment, with respect to:
 - (i) States, including, in particular, small island developing States, which due to their geographical circumstances and level of development, are injured or specially affected by or are particularly vulnerable to the adverse effects of climate change?
 - (ii) Peoples and individuals of the present and future generations affected by the adverse effects of climate change?"
- 2. The Pacific Islands Forum Secretariat (hereinafter referred to as "PIF Secretariat" or "PIFS") has the honour to present the following written statement, pursuant to Article 66 of the Statute of the International Court of Justice and in accordance with the Order of the Court of 20 April 2023 and subsequent Order of 15 December 2023.

B. SCOPE

- 3. This written statement is made by the PIF Secretariat, which is established pursuant to the 2005 *Agreement Establishing the Pacific Islands Forum*¹ (Annex 1) and does not constitute a statement of the individual PIF Members², individually or jointly.
- 4. Without prejudice to the right of PIF Members, individually or jointly, to make statements to the Court, this PIF Secretariat statement comprises and cites agreed PIF regional collective positions, to date, on the issue of climate change-related sea-level rise.
- 5. This PIF Secretariat written statement is limited in scope to the issue of "climate change-related sea-level rise", and therefore comprises factual and legal elements that aim to inform and respond to the legal question before the Court as pertaining to the issue of climate change-related sea-level rise.
- 6. Accordingly, this PIF Secretariat written statement highlights two key PIF instruments as follows:
 - (1) the 2021 Pacific Islands Forum Declaration on Preserving Maritime Zones in the Face of Climate Change-Related Sea-Level Rise (Annex 2); and
 - (2) the 2023 Pacific Islands Forum Declaration on the Continuity of Statehood and the Protection of Persons in the Face of Climate Change-Related Sea-Level Rise (Annex 3).

C. CONTEXT

- 7. Pacific nations are amongst the most vulnerable and susceptible to the adverse effects of climate change. PIF Leaders continue to reaffirm climate change, inclusive of sea-level rise caused by anthropogenic emissions of greenhouse gases, as the single greatest threat to the livelihoods, security and wellbeing of the people of the Pacific.
- 8. PIF Members have been at the forefront of tackling issues such as the protection of persons affected by sea-level rise through climate change and disaster resilience efforts. States such as Kiribati, the Republic of the Marshall Islands, and Tuvalu are taking urgent actions to protect their people who live the reality of climate change and sea-level rise on a daily basis.
- 9. The *Boe Declaration on Regional Security*³, endorsed by PIF Leaders in 2018, recalls the principles of good governance, the liberty of the individual under the law, and democratic processes and institutions. It recognises the vulnerability of PIF Members to security threats, as well as the importance placed on an expanded concept of security inclusive of human security, humanitarian assistance, prioritising environmental security, and regional cooperation

¹ Article IV(1): "Establishment of the Pacific Islands Forum Secretariat –The Forum shall have a secretariat to be known as the Pacific Islands Forum Secretariat ...".

² The Pacific Islands Forum – as distinct from the Pacific Islands Forum Secretariat – is an international organisation currently comprised of 18 independent and self-governing Member states and territories, namely, Australia, the Cook Islands, the Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, the Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

³ Pacific Islands Forum (2018), *Boe Declaration on Regional Security*. Available at: https://forumsec.org/publications/boe-declaration-regional-security (Accessed 21 March 2024).

in building resilience to disasters and climate change, including through regional cooperation and support.

- 10. The *Kainaki II Declaration for Urgent Climate Action Now*⁴, endorsed by PIF Leaders in 2019, recognises the "climate change crisis facing our Pacific Island Nations", and in 2022, PIF Leaders "declared that the Pacific is facing a Climate Emergency that threatens the livelihoods, security and wellbeing of its people and ecosystems, backed by the latest science and the daily lived realities in Pacific communities"⁵.
- 11. Leaders also endorsed the 2050 Strategy for the Blue Pacific Continent⁶, the region's overarching policy framework to advance Pacific regionalism for the next three decades, articulating the region's long-term vision, values, and key thematic areas and strategic pathways.

D. CLIMATE CHANGE-RELATED SEA-LEVEL RISE

- 12. Sea-level rise related to climate change is a real and pressing issue, and within the PIF context, the issue of climate change-related sea-level rise is being considered alongside the deliberation of this issue at the UN General Assembly Sixth Committee (Legal), in particular through the work of the International Law Commission (ILC) and its current study of the topic "Sea-level rise in relation to International Law". To date, five PIF Submissions have been made to the ILC on this topic.
- 13. In this respect, the issue of climate change-related sea-level rise is considered by the ILC under the three sub-headings of "law of the sea issues", "sea-level rise in relation to statehood", and "the protection of persons affected by sea-level rise".
- 14. As it relates to the issue of climate change-related sea-level rise, maritime zones and coastlines, PIF Members have been at the forefront of oceans governance instruments, including as follows:

• PIF Submission No. 5 of 9 January 2024, which focused on the formal conveyance of the 2023 PIF Declaration to the ILC. Available at: https://legal.un.org/ilc/sessions/75/pdfs/english/slr pif.pdf;

- PIF Submission No. 4 of 1 August 2023, which conveyed Information Paper No. 2 on Statehood and the Protection of Persons affected by Sea-Level Rise. Available at: https://legal.un.org/ilc/sessions/75/pdfs/english/slr_pif.pdf;
- PIF Submission No. 3 of 31 December 2021, which conveyed Information Paper No. 1 on Statehood and the Protection of Persons affected by Sea-Level Rise. Available at: https://legal.un.org/ilc/sessions/73/pdfs/english/slr_pif.pdf;
- PIF Submission No. 2 of 26 February 2021 in response to the "First Issues Paper by Bogdan Aurescu and Nilüfer Oral, Co-Chairs of the Study Group on sea-level rise in relation to international law"; and
- PIF Submission No. 1 of 30 December 2019 on the first sub-topic of "sea-level rise in relation to law of the sea issues". Available at: https://legal.un.org/ilc/sessions/72/pdfs/english/slr pif.pdf.

⁴ Pacific Islands Forum (2019), *Kainaki II Declaration for Urgent Climate Action Now*. Available at: https://forumsec.org/publications/kainaki-ii-declaration-urgent-climate-action-now (Accessed 21 March 2024).

⁵ Pacific Islands Forum (2022), *51st Pacific Islands Forum Communique*, paragraph 33. Available at: https://forumsec.org/publications/report-communique-51st-pacific-islands-forum-leaders-meeting (Accessed 21 March 2024).

⁶ Pacific Islands Forum (2022), *2050 Strategy for the Blue Pacific Continent*. Available at: https://forumsec.org/2050 (Accessed 21 March 2024).

⁷ International Law Commission (2024), Analytical Guide to the Work of the International Law Commission – Sea-level rise in relation to International Law. Available at: https://legal.un.org/ilc/guide/8 9.shtml (Accessed 21 March 2024).

⁸ The five PIF Submissions are as follows:

- the 2010 Framework for a Pacific Oceanscape: a catalyst for implementation of ocean policy⁹, adopted by the PIF, calls upon States to address their baselines in the face of sea-level rise;
- the 2014 *Palau Declaration on 'The Ocean: Life and Future'* 10, adopted by the PIF, calls for strengthened regional efforts to fix maritime baselines and boundaries to ensure that the impacts of climate change and sea-level rise do not result in reduced jurisdiction;
- the 2015 *Taputapuātea Declaration on Climate Change* ¹¹, made by the 8 Members of the Polynesian Leaders Group¹², underlines the importance of the permanency of established baselines without taking account of sea-level rise; and
- the 2018 *Delap Commitment*¹³, signed by 8 Pacific Islands Leaders of the Parties to the Nauru Agreement ¹⁴, agrees "to pursue legal recognition" that "the defined baselines established under the 1982 *United Nations Convention on the Law of the Sea* (UNCLOS) remain in perpetuity irrespective of the impacts of sea level rise".
- 15. Further, PIF Leaders have made a number of pronouncements over the years, including in 1989 where "The Forum expressed concern about the possible effects on Island countries of rising sea-levels, resulting from global warming, and emphasised the importance of a regional approach to environmental matters"¹⁵.
- 16. In 2017, PIF Leaders called for a united regional effort that established and secured international recognition of the permanent protection and integrity of the maritime zones and sovereignty from the impacts of climate change and sea-level rise. ¹⁶ The following year, in 2018, "Leaders acknowledged the urgency and importance of securing the region's maritime boundaries as a key issue for the development and security of the region, and thereby for the security and well-being of the *Blue Pacific*" ¹⁷.
- 17. PIF Leaders made a commitment in 2019¹⁸, at their Fiftieth Meeting, to a collective effort with the aim of ensuring that once a PIF Member's maritime zones are delineated in accordance with the 1982 UNCLOS, the Member's maritime zones could not be challenged or

⁹ Pacific Islands Forum (2010), *Framework for a Pacific Oceanscape: a catalyst for implementation of ocean policy*. Available at: https://opocbluepacific.org/download/69/pacific-regional-ocean-policies-declarations/972/framework-for-a-pacific-oceanscape-2010.pdf (Accessed 21 March 2024).

¹⁰ Pacific Islands Forum (2014), *Palau Declaration on 'The Ocean: Life and Future'*, https://forumsec.org/publications/palau-declaration-ocean-life-and-future-charting-course-sustainability (Accessed 21 March 2024).

¹¹ Polynesian Leaders Group (2015), *Taputapuātea Declaration on Climate Change*, https://www.samoagovt.ws/wp-content/uploads/2015/07/The-Polynesian-P.A.C.T.pdf (Accessed 21 March 2024).

¹² American Samoa, Cook Islands, French Polynesia, Niue, Samoa, Tokelau, Tonga and Tuvalu.

¹³ Parties to the Nauru Agreement (2018), *Delap Commitment*. Available at: https://www.pnatuna.com/content/delap-commitment (Accessed 21 March 2024).

¹⁴ FSM, Kiribati, Nauru, Palau, PNG, the RMI, Solomon Islands, and Tuvalu.

¹⁵ Pacific Islands Forum (1989), *Twentieth South Pacific Forum Communique*, paragraph 20. Available at: https://forumsec.org/publications/twentieth-south-pacific-forum-tarawa-kiribati-10-11-july-1989 (Accessed 21 March 2024).

¹⁶ Pacific Islands Forum (2017), *Forty-Eighth Pacific Islands Forum Communique*, paragraph 10. Available at: https://forumsec.org/publications/forty-eighth-pacific-islands-forum-apia-samoa-5-8-september-2017 (Accessed 21 March 2024).

¹⁷ Pacific Islands Forum (2018), *Forty-Ninth Pacific Islands Forum Communique*, paragraph 26. Available at: https://forumsec.org/publications/forty-ninth-pacific-islands-forum-nauru-3rd-6th-september-2018 (Accessed 21 March 2024).

¹⁸ Pacific Islands Forum (2019), *Fiftieth Pacific Islands Forum Communique*, paragraphs 25 – 26. Available at: https://forumsec.org/publications/fiftieth-pacific-islands-forum-tuvalu-13-16-august-2019 (Accessed 21 March 2024).

reduced as a result of sea-level rise and climate change. This commitment reflected a long-standing concern of PIF Members who have been at the forefront of oceans governance instruments as outlined above.

18. Noting the significant and complex international law issues posed by sea-level rise, the PIF endorsed in 2020 the development of a regional normative declaration as well as established a Specialist Sub-Committee on Sea-Level Rise in Relation to International Law to lead regional cooperation on this developing issue.¹⁹

(1) 2021 PACIFIC ISLANDS FORUM DECLARATION ON PRESERVING MARITIME ZONES IN THE FACE OF CLIMATE CHANGE-RELATED SEALEVEL RISE, 6 AUGUST 2021

- 19. The relationship between climate change-related sea-level rise and maritime zones is of fundamental importance to the PIF region (and the rest of the international community). Ninety-six percent (96%) of the Pacific region is ocean, and the ocean is at the heart of the region's geography, cultures and economies.²⁰ PIF communities have a profound connection and reliance on the Blue Pacific: the past, present and future development of the region are based on rights and entitlements guaranteed in the 1982 UNCLOS. For example, fisheries make a huge contribution to Forum Island economies (offshore tuna is worth US\$ 1.7 billion and 25 thousand jobs to Pacific economies).
- 20. At its 50th Anniversary, on 6 August 2021, PIF Leaders endorsed the 2021 Pacific Islands Forum Declaration on Preserving Maritime Zones in the face of Climate Change-related Sea-level rise ("2021 Declaration"), conveying PIF Members' view on how the UNCLOS rules on maritime zones apply in the situation of climate change-related sea-level rise.
- 21. The threat of climate change-related sea-level rise is a "defining issue that imperils the livelihoods and wellbeing of our peoples and undermines the realisation of a peaceful, secure and sustainable future for our region" [2021 Declaration, Para 9].
- 22. The 2021 Declaration records the PIF position that maritime zones, once established and notified to the Secretary-General of the United Nations, in accordance with UNCLOS, will be maintained as such, along with rights and entitlements flowing from them, without reduction notwithstanding any physical changes connected to climate change-related sea-level rise.
- 23. The 2021 Declaration is firmly based and grounded on the primacy of UNCLOS. It clarifies PIF Members' interpretation of UNCLOS, and represents the agreed collective view of the PIF on how UNCLOS rules on maritime zones apply in the situation of climate change-related sea-level rise, a view which is supported by the Convention and its underpinning legal principles, including those of legal stability, security, certainty, predictability, and equity.
- 24. Preserving maritime zones in the manner set out in the 2021 Declaration contributes to a just international response to climate change-related sea-level rise and towards the goal that the legal rights and entitlements of PIF Members as sovereign nations are not lost nor challenged due to sea-level rise.

7

2024).

¹⁹ Pacific Islands Forum (2020), 2020 Forum Foreign Ministers Meeting Outcomes. Available at: https://forumsec.org/publications/2020-forum-foreign-ministers-meeting-outcomes (Accessed 21 March 2024). Pacific Islands Forum Leaders Ocean Statement 2021, page 1. Available at: https://forumsec.org/publications/pacific-islands-forum-leaders-ocean-statement-2021 (Accessed 21 March

(2) 2023 PACIFIC ISLANDS FORUM DECLARATION ON THE CONTINUITY OF STATEHOOD AND THE PROTECTION OF PERSONS IN THE FACE OF CLIMATE CHANGE-RELATED SEA-LEVEL RISE, 9 NOVEMBER 2023

- 25. Pacific Islands Forum Leaders in 2022 directed the region to consider the issues of statehood and the protection of persons affected by sea-level rise, guided and informed by applicable principles and norms of international law and relevant international frameworks and standards.²¹ This followed on from the landmark 2021 Declaration which has been endorsed by around a hundred countries.²²
- 26. This led to the 2023 Pacific Islands Forum Declaration on the Continuity of Statehood and the Protection of Persons in the Face of Climate Change-Related Sea-Level Rise ("2023 Declaration") endorsed by Leaders at the 52nd PIF Meeting held on 9 November 2023 in the Cook Islands.
- 27. The 2023 Declaration was developed by PIF Members to specifically address climate change-related sea-level rise in relation to statehood as well as relevant elements on the protection of persons, in the context of international law.
- 28. The language of the 2023 Declaration is grounded on Pacific values and priorities, drawing on the 2050 Strategy for the Blue Pacific Continent [2023 Declaration, Paras 1, 2 and 6]. It emphasises regional and sub-regional cooperation as a platform for achieving the greatest benefits for our people [Declaration, Para 3], underscores the Pacific lived experience and that coastal states, particularly SIDS and low-lying states, are disproportionately impacted and specially affected²³ [Declaration, Paras 4 and 5], and underscores the Pacific Islands Forum's commitment to protecting statehood and sovereignty in the face of climate change-related sealevel rise [Declaration, Para 6].
- 29. The 2023 Declaration reaffirms the 2021 Declaration [2023 Declaration, Para 7]. Both declarations are mutually supportive, including in the way they protect the rights and entitlements of PIF Members.
- 30. The 2023 Declaration is grounded on existing principles and features of current international law to declare that the statehood and sovereignty of PIF Members will continue, and the rights and duties inherent thereto will be maintained, notwithstanding climate change-related sea-level rise.
- 31. The 2023 Declaration also expresses a commitment by PIF Members, both individually and collectively, to protecting persons affected by climate change-related sea-level rise, including with respect to human rights duties, political status, culture, cultural heritage, identity and dignity, and meeting essential needs.

²¹ Pacific Islands Forum (2022), *Fifty-First Pacific Islands Forum Communique*, paragraphs 39 – 42. Available at: https://www.forumsec.org/2022/07/17/reportcommunique-of-the-51st-pacific-islands-forum-leaders-meeting/ (Accessed 21 March 2024).

²² Including the membership of the Alliance of Small Island States (AOSIS); the Organisation of African, Caribbean and Pacific States (OACPS); the United States of America; Japan; and Korea.

²³ The International Court of Justice in the North Sea Continental Shelf Case (Federal Republic of Germany v Denmark; Federal Republic of Germany v Netherlands), Judgement of 20 February 1969, ICJ Reports 1969, identified at [73] and [74] the particular relevance of state practice of states whose interests are specially affected when assessing customary international law.

Statehood

- 32. A core element of the 2023 Declaration is PIF Members' declaration that their statehood and sovereignty will continue, and the rights and duties inherent thereto will be maintained, notwithstanding the impact of climate change-related sea-level rise [2023 Declaration, Para 13].
- 33. The 2023 Declaration also recognises that the continuity of statehood in the face of climate change-related sea-level rise is consistent with important principles and rights of international law. This includes the right of peoples to self-determination, the right to a nationality, the protection of territorial integrity and political independence, principles of equity and fairness, the maintenance of international peace and security which in turn requires stability in international relations, the right of a state to provide for its preservation, the duty of cooperation, the sovereign equality of states, and permanent sovereignty over natural resources [2023 Declaration, Para 9].²⁴

Protection of persons

- 34. The 2023 Declaration also expresses a commitment by PIF Members, both individually and collectively, to protecting persons affected by climate change-related sea-level rise including with respect to human rights duties, political status, culture, cultural heritage, identity and dignity, and meeting essential needs [2023 Declaration, Para 10].
- 35. The Pacific Regional Framework on Climate Mobility²⁵ endorsed by PIF Leaders in 2023 promotes regional collaboration on rights based and people-centred considerations in the context of climate change, including in respect of staying in place, and planned relocation, migration, and displacement. It outlines key regional principles of: leadership and collaboration; human rights, human security and protection; protecting culture, cultural heritage and identity and dignity; and continuing statehood, nationality and associated rights. It firmly acknowledges PIF Members' fundamental priority to 'stay in place' in our ancestral homes, including through land reclamation, and is a global first that aims to provide practical guidance to governments planning for and managing climate mobility, while also respecting Members' national laws and policies.
- 36. In this context, the 2023 Declaration therefore sets out a non-exhaustive description of what protection of persons involves, saying protecting persons and communities affected by climate change-related sea-level rise involves protecting, promoting, and fulfilling their human rights, including civil, political, economic, social and cultural rights, and also protecting their culture, cultural heritage, identity and dignity, and meeting their essential needs, including through international cooperation [2023 Declaration, Para 10].
- 37. The 2023 Declaration then links protection of persons to statehood by referring to States' important duty in ensuring protection of their people, and that continuity of statehood is necessary and fundamental for that protection to be implemented and to endure [2023 Declaration, Para 11]. It then reiterates this by declaring that PIF Members individually and collectively bear an important responsibility for ensuring protection of our people and are

²⁴ Nothing in the 2023 Declaration should be interpreted as undermining the sovereignty and territorial integrity of Pacific Islands Forum Members.

²⁵ Pacific Islands Forum (2023), *Pacific Regional Framework on Climate Mobility*. Available at: https://forumsec.org/sites/default/files/2024-

^{02/}Pacific%20Regional%20Framework%20on%20Climate%20Mobility.pdf (Accessed 21 March 2024).

committed to protecting persons affected by climate change-related sea-level rise, including with respect to human rights duties and meeting essential needs [2023 Declaration, Para 14].

Cooperation and a call upon the international community

38. The final two paragraphs of the 2023 Declaration focus on cooperation to achieve the purposes of the 2023 Declaration, reflecting the fact that cooperation is a founding purpose of the Pacific Islands Forum [2023 Declaration, Para 15]. The Declaration highlights that such cooperation is to occur between PIF Members. The Declaration also calls upon the international community to support the Declaration and cooperate in achieving its purposes consistent with the duty to cooperate and principles of equity and fairness [2023 Declaration, Para 16].

E. FINAL REMARKS

- 39. In conclusion, this PIF Secretariat statement has cited agreed PIF regional collective positions, to date, and factual and legal elements that aim to inform and respond to the legal question before the Court as pertaining to the issue of climate change-related sea-level rise.
- 40. The 2021 and 2023 PIF Declarations respectively offer interpretation of international law, including the 1982 UNCLOS and relevant international law principles, as pertaining to the global phenomenon of climate change-related sea-level rise, and in pursuit of the protection of States, Peoples and individuals of present and future generations affected by the adverse effects of climate change.
- 41. The PIF Secretariat expresses highest appreciation once again for the opportunity afforded to all UN Members and international organisations to contribute to these important proceedings of the Court. The PIF Secretariat looks forward to further participating on this matter, which remains of utmost importance to our Blue Pacific Continent.

Respectfully submitted,

Her Excellency Mrs Merewalesi Falemaka

Permanent Observer, Ambassador of the Pacific Islands Forum to the United Nations Office and Other International Organisations in Geneva

CERTIFICATION

I, Mary Victoria Faasau, International Legal Adviser, hereby certify that the copies of this written statement and all documents annexed to it are true copies of the originals.

Mary Victoria Faasau International Legal Adviser Pacific Islands Forum Secretariat

LIST OF ANNEXES

The Annexes to this written statement by the Pacific Islands Forum Secretariat are set out below and numbered in the order in which they are referred to in the text.

Annex 1	2005 Agreement Establishing the Pacific Islands Forum
Annex 2	2021 Pacific Islands Forum Declaration on Preserving Maritime Zones in the Face of Climate Change-Related Sea-Level Rise
Annex 3	2023 Pacific Islands Forum Declaration on the Continuity of Statehood and the Protection of Persons in the Face of Climate Change-Related Sea-Level Rise