

Buoying Statehood: The Impact of Rising Sea Levels on Statehood in International Law

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I. Introduction

The United Nations Framework Convention on Climate Change (“UNFCCC”) entered into force nearly thirty years ago with the goal of “preventing ‘dangerous’ human interference with the climate system.”¹ There is a near-universal ratification of the UNFCCC, with 198 parties to the Convention today.² The Conference of the Parties (“COP”) is the “supreme decision-making body of the Convention,” where the Parties meet to ensure the “effective implementation of the Convention.”³ At COP21 in 2015,

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¹ *What is the United Nations Framework Convention on Climate Change?*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, <https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change> [<https://perma.cc/6LEJ-57ZF>].

² *Id.*

³ *Conference of the Parties (COP)*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the->

the Parties reached the Paris Agreement, which was revolutionary in its aim to collectively combat climate change by keeping the global temperature in the 21st century from rising more than 2°C – preferably less than 1.5°C above pre-industrial levels.⁴ In November 2022, the Conference of the Parties met for the 27th time in Sharm El Sheikh, Egypt (COP27).⁵

In the weeks leading up to COP27, the U.N. Environment Programme (“UNEP”) released its Emissions Gap Report 2022, which found that “the world is falling far short of the Paris goals, with no credible pathway to 1.5°C in place.”⁶ UNEP’s report estimated there is likely to be a 2.8°C increase in global warming by the end of the century with the environmental policies currently in place in Party States to the Paris Agreement.⁷ Global warming is further complicated by the way ecosystems respond to the increase in temperature: in some areas of the world the increased temperatures cause drought, harming both agriculture and public health (due to lack of access to clean water, while in other parts of the world the weather patterns may shift to extreme weather, including dangerous storms and life-threatening flood events.⁸

Increases in global temperatures also contribute to rising sea levels in two ways. First, as the air warms, ice from glaciers melt, which adds water to global sea levels, and second, the existing water expands as temperatures increase.⁹ Scientists suggest that due to the rise in sea level, many low-lying atoll islands, including several island nations, will be “uninhabitable by the mid-21st century.”¹⁰

parties-cop [<https://perma.cc/ZB8K-FJ3W>].

⁴ *Key Aspects of the Paris Agreement*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, <https://unfccc.int/most-requested/key-aspects-of-the-paris-agreement> [<https://perma.cc/37JT-Q9LN>].

⁵ Lisa Friedman, *What is COP27? And Other Questions About the Big U.N. Climate Summit*, N.Y. TIMES (Oct. 31, 2022), <https://www.nytimes.com/article/cop27-climate-change-summit.html> [<https://perma.cc/PQ3P-TM73>].

⁶ UNITED NATIONS ENVIRONMENT PROGRAMME, EMISSIONS GAP REPORT 2022, KEY MESSAGES 1 (2022).

⁷ *Id.*

⁸ *Climate Change Impacts*, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, (Aug 13, 2021), <https://www.noaa.gov/education/resource-collections/climate/climate-change-impacts> [<https://perma.cc/MT2Y-N9V4>].

⁹ *Vital Signs of the Planet: Sea Level*, NATIONAL AIR AND SPACE ADMINISTRATION, <https://climate.nasa.gov/vital-signs/sea-level/> [<https://perma.cc/7AHL-QEAA>].

¹⁰ Curt D. Storlazzi et al., *Most Atolls Will Be Uninhabitable By The Mid-21st Century Because of Sea-Level Rise Exacerbating Wave-Driven Flooding*, 4 SCI.

The rise in sea level impacts economies, livelihoods, food and fresh water security, public health, immigration policies, cultural heritage, and more, in a way that poses a significant threat to the existence of low-lying coastal areas and island nations.¹¹

The risks associated with rising sea levels “are projected to increase by at least one order of magnitude by 2100 without significant adaption and mitigation action.”¹² In fact, scientists suggest that these risks will continue to accelerate beyond 2100, even if warming were to stop now.¹³ More than ever, there is wide consensus by scientists that climate change is happening and will continue to accelerate and worsen if no action is taken.¹⁴

Developing countries are disproportionately affected by climate change generally because of the failures of institutions to anticipate, prevent, or aid recovery from the effects of climate change.¹⁵ Moreover, developing countries tend to rely on natural resources and “climate-sensitive sectors” like agriculture for economic growth.¹⁶ Developing countries also both currently and historically contribute the lowest share of global carbon dioxide emissions, but are also the most vulnerable to climate shocks and effects.¹⁷ Conversely, China, the United States, the EU, India, Indonesia, Brazil, and Russia, some of the largest economies in the world, are likewise the largest state emitters of greenhouse gases; when combined with the international transportation of goods, these seven states are responsible for more than half of the emissions globally.¹⁸

In 1991, the Alliance of Small Island States called for a financial

ADVANCES 1, 5 (2018).

¹¹ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC], SIXTH ASSESSMENT REPORT FACT SHEET: RESPONDING TO SEA LEVEL RISE 1 (2022).

¹² *Id.*

¹³ *Id.*

¹⁴ PIYA ABEYGUNAWARDENA ET AL., POVERTY AND CLIMATE CHANGE: REDUCING THE VULNERABILITY OF THE POOR THROUGH ADAPTATION 1 (2009).

¹⁵ STEPHANIE HALLEGATTE ET AL., SHOCK WAVES MANAGING THE IMPACTS OF CLIMATE CHANGE ON POVERTY 2 (2015).

¹⁶ ABEYGUNAWARDENA, *supra* note 14, at 5.

¹⁷ Hannah Ritchie, *Who Has Contributed Most to Global CO2 Emissions?*, OUR WORLD IN DATA (Oct. 1, 2019), <https://ourworldindata.org/contributed-most-global-co2> [<https://perma.cc/7UR7-TWPU>].

¹⁸ UNITED NATIONS ENVIRONMENT PROGRAMME, EMISSIONS GAP REPORT 2022, 7 (2022).

compensation system related to climate change.¹⁹ The Alliance advocated both a climate fund “to finance measures to counter the adverse consequences of climate change” as well as an insurance regime that would “provide financial insurance against the consequences of sea level rise.”²⁰ Today, this scheme is generally referred to as a “loss and damage fund,” and has been the subject of intense debate at climate conferences for years.²¹ There is no official definition by the United Nations of what is included in “loss and damage.”²² However, in U.N. climate discussions, loss generally refers to harms “that go beyond what people can adapt to,” including financial consequences from destruction of property, infrastructure, as well as agricultural and natural resources that require reconstruction or relocation, and non-economic loss such as death, forced migration, and loss of culture.²³ The United States has opposed the creation of such a fund.²⁴

Given the timing of the UNEP report and COP27, developing countries renewed their calls once more for commitments to compensate for the severe negative effects of climate change, such as the relocation and resettlement of vulnerable communities affected by sea level rise.²⁵ After much negotiation at COP27, the

¹⁹ Intergovernmental Negotiating Comm. for a Framework Convention on Climate Change, U.N. Doc. A/AC/237/WG.II/CRP.8 at 2 (Dec. 17, 1991).

²⁰ *Id.*

²¹ See Lauren Sommer, *Developing Nations Say They're Owed For Climate Damage: Richer Nations Aren't Budgeting*, NAT'L PUB. RADIO (Nov. 11, 2021, 4:18 PM), <https://www.npr.org/2021/11/11/1054809644/climate-change-cop26-loss-and-damage> [<https://perma.cc/BJD3-TWVW>] (describing how developed countries fear admitting responsibility for contributions to climate change would expose them to frequent compensation to less developed countries).

²² Preeti Bhandari et al., *What is “Loss and Damage” from Climate Change? 8 Key Questions, Answered*, WORLD RES. INST. (Dec. 14, 2022), <https://www.wri.org/insights/loss-damage-climate-change> [<https://perma.cc/9TF9-JLQK>].

²³ *Id.* See also Deborah Campbell & Aaron Krol, *Loss and Damage*, MIT CLIMATE PORTAL: EXPLAINERS (Dec. 1, 2022), <https://climate.mit.edu/explainers/loss-and-damage#:~:text=%E2%80%9CLoss%20and%20damage%E2%80%9D%20is%20a,place%20or%20ways%20of%20life> [<https://perma.cc/AZG4-EJDQ>].

²⁴ See Jean Chemnick, *U.S. Isolated on Loss and Damage*, E&E NEWS (Nov. 17, 2022, 6:43 AM), <https://www.eenews.net/articles/u-s-isolated-on-loss-and-damage/> [<https://perma.cc/28ZS-3GNW>].

²⁵ Friedman, *supra* note 5; see also Press Release, Climate Vulnerable Forum, Forum of Vulnerable Nations Calls for Dedicated International Funds for Climate Crisis Loss & Damage, <https://thecvf.org/our-voice/news/press-releases/forum-of-vulnerable-nations->

Parties agreed to create a Loss and Damage Fund for the first time, hailed by many observers as the most significant win since the Paris Agreement in 2015.²⁶

The intricacies and details of the fund remain to be seen. At the conclusion of COP27, no decisions were made “on who should pay into the fund, where this money will come from, and which countries will benefit.”²⁷ For the next year, representatives from twenty-three states – ten developed and thirteen developing countries – will work together to establish the structure for the fund.²⁸ For example, Vanuatu, a small island state in the South Pacific, estimated that the country needs climate-related financing commitments of over \$177 million to address the loss and damage from climate change.²⁹ There is also the obstacle of compensating priceless losses: burial grounds, cultural sites, or coral reefs.³⁰ Moreover, scholars do not agree on the “proper economic methods to use for assessing economic damages and the cost of adaptation.”³¹

calls-for-dedicated-international-funds-for-climate-crisis-loss-damage/
[<https://perma.cc/VR7Y-W49M>].

²⁶ See *COP27 Ends with Announcement of Historic Loss and Damage Fund*, UNITED NATIONS ENVIRONMENT PROGRAMME, <https://www.unep.org/news-and-stories/story/cop27-ends-announcement-historic-loss-and-damage-fund> [<https://perma.cc/X3LM-FEFT>]; see also Chemnick, *supra* note 24 (United States agreed to include loss and damage on the agenda only if developing countries agreed to exclude “liability for historic emitters or compensation for countries affected by that pollution”).

²⁷ See *COP27 Ends with Announcement of Historic Loss and Damage Fund*, UNITED NATIONS ENVIRONMENT PROGRAMME, <https://www.unep.org/news-and-stories/story/cop27-ends-announcement-historic-loss-and-damage-fund> [<https://perma.cc/X3LM-FEFT>].

²⁸ See Sharm el-Sheikh Climate Change Conference, *Funding Arrangements for Responding to Loss and Damage Associated with the Adverse Effects of Climate Change, Including a Focus on Addressing Loss and Damage*, 5 annex ¶¶ 2, 4, U.N. Doc. FCCC/CP/2022/L.18–FCCC/PA/CMA/2022/L.20 (Nov. 19, 2022).

²⁹ See VANUATU’S REVISED AND ENHANCED 1ST NATIONALLY DETERMINED CONTRIBUTION 2021-2030, at 37 (2022).

³⁰ See Lauren Sommer, *Do Wealthy Countries Owe Poorer Ones for Climate Change? One Country Wrote Up a Bill*, NAT’L PUB. RADIO (Nov. 7, 2022), <https://www.npr.org/2022/11/07/1133270753/climate-change-loss-damage-cop27> [<https://perma.cc/7HBQ-TEW5>] (discussing that burial grounds, an important connection to ancestry in Vanuatu, are becoming submerged due to sea level rise and increased tides associated with climate change and coral reefs, an important ecological cornerstone for residents who depend on fishing for subsistence, are at risk of deteriorating).

³¹ Anil Markandya & Mikel González-Eguino, *Integrated Assessment for Identifying Climate Finance Needs for Loss and Damage: A Critical Review*, in *LOSS AND DAMAGE FROM CLIMATE CHANGE: CONCEPTS, METHODS AND POLICY OPTIONS* 343, 344 (Reinhard

According to one study, the loss and damage costs are expected to be anywhere from \$290-580 billion in 2030, and possibly up to \$1.016 trillion in 2040.³²

The United States has not met existing financial commitments to other climate funds. In 2018, the United States pledged \$3 billion to the Green Climate Fund, but Congress only approved \$2 billion.³³ At the time of this writing, none of the 198 Parties have pledged any amount to the newly created Loss and Damage Fund from COP27.³⁴ It remains to be seen whether this is another empty promise from the developed world. Even if the fund receives pledges, it will have to overcome design issues that have plagued other climate funds and rendered them largely ineffective.³⁵ Meanwhile, global temperatures continue to accelerate, and sea level is still rising.³⁶

With no credible commitments from international leaders to address loss and damage, it is time for international law to grapple with the realities of the escalating impacts of climate change. If states become uninhabitable due to climate change, what are the legal implications for their statehood? Part II of this Note will explore the criteria for Statehood under international law, how rising sea levels due to climate change affect States' legal status, and whether States should continue or become extinct because of this changing legal status. In Part III, this Note analyzes potential mechanisms to address the erosion of Statehood. Finally, this Note will provide a conclusion on how providing maritime entitlements to artificial islands is the most advantageous mechanism for addressing the loss of habitability due to sea level rise for Small Island States.

Mechler et al. eds., 2019).

³² See *id.* at 349.

³³ *Resource Mobilisation: Initial Resource Mobilisation*, GREEN CLIMATE FUND (last visited Mar. 14, 2023), <https://www.greenclimate.fund/about/resource-mobilisation/irm> [<https://perma.cc/8WTK-AYPK>].

³⁴ See Sara Schonhardt, *A Climate Fund Was Born. It Still Doesn't Have Any Money*, E&E NEWS (Jan. 11, 2023, 6:41 AM), <https://www.eenews.net/articles/a-climate-fund-was-born-it-still-doesnt-have-any-money> [<https://perma.cc/7PGJ-FHS7>].

³⁵ See *id.* (describing how Green Climate required consensus before any measures could be taken, meaning one country could block efforts and often did).

³⁶ Michael Oppenheimer et al., *Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities*, in IPCC: SPECIAL REPORT ON THE OCEAN AND CRYOSPHERE IN A CHANGING CLIMATE 321, 323 (Hans-Otto Pörtner et al. eds., 2022).

II. Statehood & Sea Level Rise

A. *What is a State?*

The sovereignty-focused international system that exists today was born out of the Peace of Westphalia in 1648, which ended the Thirty Years War.³⁷ Sovereignty may be understood as “the recognition by other states of the right to exclusive authority within a given territory, as opposed to the exercise of authority.”³⁸ At its core, sovereignty is about “legitimation”: each state recognizes the other as the final authority in their respective territory so that only they may be considered true actors.³⁹

The international community has come a long way since 1648. Today it is filled with actors beyond states, including illegitimate non-state actors such as terrorist organizations, intergovernmental organizations, non-governmental organizations, corporations, private individuals, and more. These actors have varying levels of power, sovereignty, duties, and responsibilities that flow from their status in the international community. Statehood is generally considered to be the most prized status because it comes with “the broadest range of rights, duties, and capabilities.”⁴⁰

There are two primary theories of statehood in modern international law: the declaratory theory and the constitutive theory.⁴¹ Under the declaratory theory, an entity becomes a state the moment it fulfills four factual criteria – there is no need for any action on the part of other States.⁴² Under the constitutive theory, the entity must fulfill the four criteria and then be subsequently recognized as a State by other States.⁴³ In both cases, however, the entity must fulfill the same four criteria outlined in the 1933 Montevideo Convention on the Rights and Duties of States: “(a) a permanent population; (b) a defined territory; (c) government; and

³⁷ See Derek Croxton, *The Peace of Westphalia of 1648 and the Origins of Sovereignty*, 21 INT’L HIST. REV. 569, 569 (1999).

³⁸ *Id.* at 570.

³⁹ *Id.*

⁴⁰ Amy E. Eckert, *Constructing States: The Role of the International Community in the Creation of New States*, 13 J. PUB. AND INT’L AFFS. 19, 19 (2002).

⁴¹ *Id.* at 21.

⁴² *Id.*

⁴³ *Id.* at 24.

(d) capacity to enter into relations with the other States.”⁴⁴

The requirements are ambiguous. For example, the Montevideo Convention does not specify how long a population must be in existence to be permanent. Most scholars generally agree that a permanent population is some kind of “stable” population, seemingly affording a degree of flexibility in its application.⁴⁵ The territorial requirement is similarly ambiguous. A State must have a defined territory (a geographic boundary), but “no minimum amount of territory is required.”⁴⁶ Further, that part of an entity’s boundary is disputed or claimed by another entity (or State), will not defeat its claim of Statehood.⁴⁷ Generally, however, populations and boundaries may ebb and flow and a State remains a State so long as it does not “cast serious doubt upon the future frontiers of a state.”⁴⁸

B. Implications of Sea Level Rise on States

Of the four criteria, population and territory are most likely to be implicated by climate change initially. This is sensible considering how these criteria are intertwined: humans need space to exist. The rise in sea level demonstrates this point. For example, a high percentage of the populations in Small Island Developing States (“SIDS”) are located in low-elevation areas.⁴⁹ According to the Intergovernmental Panel on Climate Change, “a 5-10 cm additional sea level rise (expected for ~2030- 2050) will double flooding frequency in much of the Indian Ocean and Tropical Pacific.”⁵⁰ This flooding is likely to have negative impacts on residents’ homes and businesses in the immediate short-term due to building loss and structural damage.⁵¹ Flooding and sea level rise

⁴⁴ Montevideo Convention on the Rights and Duties of States art. 1, Dec. 26, 1933, 165 L.N.T.S. 19.

⁴⁵ Eckert, *supra* note 40, at 22.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ ICPP, *supra* note 11.

⁵⁰ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC II], SIXTH ASSESSMENT REPORT FACT SHEET: SMALL ISLANDS I (2022).

⁵¹ See Rosanne Martyr-Koller et al., *Loss and Damage Implications of Sea-Level Rise on Small Island Developing States*, 50 CURRENT OPINION ENV'T SUSTAINABILITY 245, 246 (2021) (discussing how increased flooding has resulted in “loss of homes, human displacement, loss of lives and livelihoods, economic sector disruption, increased water

will also lead to medium- and long-term coastal land loss, which can add stress on agricultural resources and exacerbate food insecurity.⁵² Moreover, as saltwater from the rising sea washes over land, it may infiltrate already scarce groundwater resources for island and coastal communities.⁵³ All of these challenges contribute to the climate impacted present and future facing island nations – states that are likely to become uninhabitable in the years and decades to come, while corresponding climate migration continues to increase in the future.⁵⁴

Though it is more likely people and communities will be forced to evacuate and out-migrate from their islands and traditional homes long before the lands become completely submerged, there is also a looming threat of borders fluctuating with weather events. A mean sea level rise of between 10–23 inches is projected by 2050 along the coastlines of Pacific Island countries.⁵⁵ Moreover, if land is not managed properly, flooding of coastal areas will cause “severe coastal erosion,” changing the territorial boundaries of these island nations.⁵⁶ The U.N. stated that sea level rise presents a particular risk to “small island developing States and other low-lying States . . . including through the loss of territory for some . . . Low-lying islands provide no possibility of retreat from sea level rise, leaving their populations with no other alternative than moving elsewhere, threatening their survival and viability.”⁵⁷

The small South Pacific island of Vanuatu, home to approximately 300,000 people, announced in late 2022 that the country is planning to relocate dozens of villages in the next two years due to “climate displacement.”⁵⁸ They are not alone. A

insecurity, and disruption to key infrastructure such as transportation and communication” in SIDS).

⁵² *Id.* at 245-46.

⁵³ See Nick Bradford, *Groundwater and the Rising Seas*, NAT’L ENV’T EDUC. FOUND., <https://www.neefusa.org/nature/water/groundwater-and-rising-seas> [<https://perma.cc/9NMQ-RVF6>] (last visited Mar. 3, 2023).

⁵⁴ See ICPP, *supra* note 11.

⁵⁵ SECRETARIAT OF THE PACIFIC REG’L ENV’T PROGRAMME (SPREP), FACTSHEET: PACIFIC CLIMATE CHANGE (2008).

⁵⁶ *Id.*

⁵⁷ U.N. Secretary General, *Oceans and the Law of the Sea*, ¶ 20, U.N. Doc. A/72/70 (Mar. 6, 2017).

⁵⁸ *Climate ‘Tragedy’: Vanuatu to Relocate ‘Dozens’ of Villages*, FRANCE 24 (Jan. 12, 2022, 7:58 AM), <https://www.france24.com/en/live-news/20221201-climate-tragedy->

government taskforce in Fiji, another island nation, has been tasked with the relocation of communities whose lands will be submerged by the sea in the near future, if not already.⁵⁹ In Fiji, it took nearly a decade to relocate a village of 140 residents just a mile inland and slightly higher in elevation.⁶⁰ The island nation of Kiribati purchased eight miles of Fiji to relocate its 110,000 residents once their atoll becomes uninhabitable.⁶¹ Meanwhile, the Maldives is developing a “floating city” with a grid of bridges and canals connecting individual homes with services like shops, schools, and hospitals, to adapt to climate change while also reducing impacts on coral reefs.⁶²

C. State Continuity or State Extinction?

The question pressing the international legal community is whether the displacement of humans from these states or the lack of a sufficiently defined territory will result in the state becoming extinct.⁶³ This issue is novel, but no longer a theoretical academic exercise. Climate change is not merely an ambiguous threat, it is presently and actively impacting already marginalized communities around the world.⁶⁴

The international community has been hesitant to admit there is

vanuatu-to-relocate-dozens-of-villages [<https://perma.cc/ZS33-ABRN>].

⁵⁹ Kate Lyons, *How to Move a Country: Fiji's Radical Plan to Escape Rising Sea Levels*, THE GUARDIAN (Nov. 8, 2022, 1:00 AM), <https://www.theguardian.com/environment/2022/nov/08/how-to-move-a-country-fiji-radical-plan-escape-rising-seas-climate-crisis> [<https://perma.cc/7AUK-95L8>].

⁶⁰ *Id.*

⁶¹ Joshua Keating, *The Sinking State*, THE WASHINGTON POST (Jul. 16, 2018), www.washingtonpost.com/news/posteverything/wp/2018/07/26/feature/this-is-what-happens-when-climate-change-forces-an-entire-country-to-look-for-higher-ground/ [<https://perma.cc/3WK3-53S7>].

⁶² Natalie Marchant, *Threatened by Rising Sea Levels, the Maldives is Building a Floating City*, WORLD ECONOMIC FORUM (May 19, 2021), <https://www.weforum.org/agenda/2021/05/maldives-floating-city-climate-change/> [<https://perma.cc/LKB4-YJXQ>].

⁶³ See generally Ori Sharon, *To Be or Not To Be: State Extinction Through Climate Change*, 51 ENV'T L. 1041 (2021) (discussing whether continued statehood is a viable, or even relevant, option for SIDS in the face of climate change).

⁶⁴ See generally ABEYGUNAWARDENA, *supra* note 14 (discussing how climate change is viewed as a reality by many of those in the scientific community and its consequences have a large impact on communities that are already vulnerable due in part to an inability to adapt due to fewer resources available).

an issue of pure extinction of states.⁶⁵ Some have argued that “a State is not necessarily extinguished by substantial changes in territory, population or government, or even, in some cases, by a combination of all three.”⁶⁶ In fact, there is a strong presumption in favor of state continuity over extinction in international law.⁶⁷ However, this presumption has generally been applied to specific cases in international law, such as loss of statehood due to succession, illegal occupation or annexation, integration processes (e.g., the European Union), or dependence on foreign states (e.g., Puerto Rico or Monaco).⁶⁸ Generally, international law scholars have addressed extinction in the context of conflict, absorption, merger, and voluntary or involuntary dissolution,⁶⁹ but the scholarship has yet to address the issue of states consumed by the effects of climate change rather than dominated by another State’s will. There is little empirical evidence about “why, when, whether, and how States might ‘disappear.’”⁷⁰ That said, some have suggested that the “disappearance of separate State organs in those of another State over a considerable period of time will normally result in the extinction of the State, so long as no substantial international illegality is involved and there is no other perceived international interest in asserting the continuity of the State.”⁷¹ To date, international law has yet to comprehensively address the possibility of state extinction by generally avoiding the matter of extinction altogether.⁷²

Another reason for glossing over the question of extinction: self-fulfilling prophecies. Some have argued that while highlighting the

⁶⁵ Mariano J. Aznar-Gómez, *The Extinction of States*, in *EVOLVING PRINCIPLES OF INTERNATIONAL LAW* 25, 26 (Eva Rieter & Henri de Waele eds., 2011).

⁶⁶ James R. Crawford, *The Extinction of States*, in *THE CREATION OF STATES IN INTERNATIONAL LAW* 700, 701 (2nd ed. 2006).

⁶⁷ *Id.*

⁶⁸ Aznar-Gómez, *supra* note 65 at 27-8.

⁶⁹ Crawford, *supra* note 66 at 705-715.

⁷⁰ Jane McAdam, ‘Disappearing States’, *Statelessness, and Relocation*, in *CLIMATE CHANGE, FORCED MIGRATION, AND INTERNATIONAL LAW* 119 (2012).

⁷¹ Crawford, *supra* note 66.

⁷² Aznar-Gómez, *supra* note 65, at 29; *but see generally* KRYSZYNA MAREK, *IDENTITY AND CONTINUITY OF STATES IN PUBLIC INTERNATIONAL LAW* 7 (2nd ed., 1968) (suggesting that “[t]raditional doctrine generally seeks to simplify the problem [of extinction] by affirming that a State becomes extinct with the disappearance of one of its so-called ‘elements.’”).

vulnerability of Small Island States to climate change has political capital, it might “contribute to a sense of fatalism that accelerates the[ir] demise.”⁷³ The end of habitability may be brought about by “a common expectation of serious climate impacts leading to changes in domestic resource use and decreased assistance from abroad.”⁷⁴ For this reason, it has been urged by human rights experts that “the legal presumption of continuity of statehood needs to be emphasized and the notion and language that such states will ‘disappear’ (i.e., lose their international legal personality) or ‘sink’ ought to be avoided.”⁷⁵

III. Mechanisms to Address Erosion of Statehood

Given the current presumption of continuity, it is unlikely that these States will become extinct. However, it is not enough to simply presume continued statehood. The practical realities of continuity must be considered: will the State relocate or are there alternatives for keeping them in their ancestral homelands? If so, where will the residents and citizens of these States go? I propose there are two models for successful continued statehood for States affected by sea level rise: 1) acquisition or creation of new territory or 2) the reframing of Statehood such that territory is no longer a requirement.

Leaders of sinking island nations have already requested legal protection from the international community as they lose territory and population to climate change.⁷⁶ Ideally, this would take the form of continuous statehood recognition and preserving the sovereignty of the sinking states, if the effects of climate change cannot be mitigated or reversed in time.

A. Acquisition of Territory

In the event states must relocate to land already dominated by another sovereign, maintaining state sovereignty would technically

⁷³ McAdam, *supra* note 70, at 120.

⁷⁴ Jon Barnett & W. Neil Adger, *Climate Dangers and Atoll Countries*, 61 CLIMATIC CHANGE 321, 330 (2003).

⁷⁵ McAdam, *supra* note 70, at 121.

⁷⁶ Lagipoiva Cherelle, *Amid Rising Seas, Island Nations Push for Legal Protection*, <https://www.pbs.org/newshour/world/amid-rising-seas-island-nations-push-for-legal-protection> [<https://perma.cc/KTU7-BGM2>] (describing how leaders from South Pacific island nations called for the protection of sovereignty for those facing threats from sea level rise).

still be possible. A presumption of statehood notwithstanding, it is unclear whether continuity of statehood would be accepted by the international community where loss of territory or population becomes permanent. Therefore, one possibility for these States is to acquire territory elsewhere.

1. Microstates

There are key examples of states that exercise most of their sovereignty but perhaps do not meet all the criteria for statehood. For example, Andorra, San Marino, Liechtenstein, Monaco, and Luxembourg all have small territories and populations, but are considered sovereign even if they are unable to carry out the typical responsibilities of states.⁷⁷ Such entities generally rely on other states to fill the gaps.: Liechtenstein, for example, has some of its “attributes of sovereignty,” such as customs and other diplomatic posts, carried out by Austria and Switzerland.⁷⁸ These states, however, are generally considered “microstates”; the State exists within the confines of another Sovereign and is unable to exercise sovereignty on its own. Most of these microstates were born out of a decolonization boundary reorganization scheme and thus already had claims to land where they previously existed as part of another state.⁷⁹

A significant obstacle to the microstate solution is that after relocation islands in the South Pacific would have no territory to which they could call their own outside of their island. They likely have no historical claim to territory on the mainland of any of the seven continents. Therefore, other sovereign States would have to permit them to relocate within their borders and then potentially operate as a microstate within those borders, or the island states would have to be willing to cede some, if not all, of their sovereignty to their hosts. This could be facilitated through the “government-in-exile” mechanism, where an entity claims sovereignty but is unable to exercise its full state capabilities because it is located outside of its territory.⁸⁰ However, such a system generally requires a

⁷⁷ Archie W. Simpson, *Revisiting the United Nations and the Micro-State Problem*, in *THE UNITED NATIONS: FRIEND OR FOE OF SELF-DETERMINATION?* 2 (Jakob R. Avgustin ed., 2020).

⁷⁸ *Id.* at 3.

⁷⁹ *Id.* at 2.

⁸⁰ McAdam, *supra* note 70, at 130.

permanent population in the state's territory, and in the case of low-lying atolls, there wouldn't be any population left on the territory.⁸¹

Alternatively, the State might consider a land lease.⁸² However, as with all of the aforementioned options, it is not particularly clear how a State on borrowed, gifted, or leased land may be able to exercise the full muscle of Sovereignty if the core attribute thereof is self-determination.⁸³ Indeed, the land would be encumbered by the leasing States' jurisdiction.⁸⁴ This could be seen as a lesser form of Statehood to island States in the South Pacific who currently have all the trappings of Statehood and the benefits that come along with it, and therefore, is unlikely to be the preferred solution.

2. Territory Purchase

Another potential option for these States is to purchase land outright. The island nation of Kiribati purchased land in Fiji in 2014 as an option of last resort to relocate the island's population.⁸⁵ The Maldives considered a similar plan in 2008 to purchase territory in Australia.⁸⁶ However, the purchase of land in this scenario is not as simple as a "mere private property transaction." For the purchase to extend sovereignty to the purchasing State, "principles of international law relating to the cession of territory would need to be adhered to in order for any transfer to be legal."⁸⁷

Moreover, a purchase of territory might not be the most ideal choice for inhabitants. For example, Kiribati has a population of around 115,000 living on 313 square miles of land.⁸⁸ However, the island nation is composed of 33 islands spread over 1.3 million

⁸¹ *Id.*

⁸² *Id.* at 147.

⁸³ *Id.* (explaining that self-determination "does not give a community a right to claim the land of an existing State if their own is threatened.").

⁸⁴ *Id.* at 148 (explaining how bilateral agreements that allow one State to "exercise some jurisdiction on the territory of another State" permit the State giving territory to retain sovereignty over said territory).

⁸⁵ Keating, *supra* note 61.

⁸⁶ Randeep Ramesh, *Maldives 'May Buy Part of Australia'*, THE SYDNEY MORNING HERALD (Nov. 11, 2018, 9:13 AM), <https://www.smh.com.au/world/maldives-may-buy-part-of-australia-20081111-5lyh.html> [<https://perma.cc/GLM2-PWEW>].

⁸⁷ McAdam, *supra* note 70, at 147.

⁸⁸ World Factbook: Kiribati Country Summary, CENTRAL INTELLIGENCE ADMINISTRATION (CIA) <https://www.cia.gov/the-world-factbook/countries/kiribati/summaries> [<https://perma.cc/9C9X-7ND5>].

square miles, making Kiribati “one of the world’s largest nations in terms of sea area.”⁸⁹ Kiribati’s exports correspondingly revolve primarily around fish and fish product.⁹⁰ In contrast, the property purchased in Fiji is merely eight square miles.⁹¹ Even if the population could live in such a small area, it is unclear how the country could be financially viable. Kiribati did not purchase an entire island in Fiji, but a portion of one of the islands.⁹² Would the purchase of territory translate to the purchase of maritime entitlements, such that Kiribati would have rights to fish in the surrounding waters? If not, how would citizens of Kiribati earn a living or produce food in such a small territory? What types of employment opportunities would be available? While it could be argued that Kiribati should have purchased a larger territory or an entire island, doing so is more expensive, and could be cost prohibitive for a small country like Kiribati. With Kiribati as an exemplar of the myriad issues facing future planning for Small Island States, it is clear that purchasing territory is neither an overtly practicable nor simple option for Small Island States in the long run.

B. Remove Territory as a Criteria for Statehood

Considering that state extinction rarely happens in practice, there is no compelling reason why a loss of population or territory should render a state extinct. In fact, advancements in our society suggest a reconceptualization of the elements of statehood might be in order. While we are unlikely to dismantle the criteria from the Montevideo Convention anytime soon, there very well may be a shift in how we think about and conceptualize the definitions of territory and population.

1. Virtual States

Given the dependence on and widespread access we have to technology, some scholars have suggested that statehood could become virtual.⁹³ Human lives have become increasingly

⁸⁹ Keating, *supra* note 61.

⁹⁰ CIA, *supra* note 88.

⁹¹ Keating, *supra* note 61.

⁹² *Id.*

⁹³ See Gilles Babinet, *The End of Nation-States Part 1: Technology-Induced Sovereignty Transfers*, INSTITUT MONTAIGNE (Nov. 27, 2018), <https://www.institutmontaigne.org/en/expressions/end-nation-states-part-1-technology->

interconnected with technology, and aspects of daily existence that previously was carried out in the physical realm have become digital. People communicate with each other digitally, shop, visit doctors, hire transportation, and more, all from cell phones. More recently, virtual reality technologies have become available to the general public.⁹⁴

Due to advances in technology, some traditional State functions have been adopted by private tech platforms.⁹⁵ Is it possible to push the boundaries of what is considered a territory beyond the physical? What if it were possible to conceive of a State whose territory was cyberspace, rather than physical space?⁹⁶

In fact, citizenship in a State could be virtual too. In 2014, Estonia offered e-Residency, a government-issued identity where anyone in the world could have the ability to start and manage businesses in the EU through this scheme.⁹⁷ Although the purpose of e-Residency is presently narrowly focused on entrepreneurs taking advantage of EU markets, the idea of a digital residency card “challenge[s] the notion that geography should limit the boundaries of the nation state.”⁹⁸ Another example of virtual citizenship is Bitnation, a blockchain technology that allows individuals to create virtual nations where the need for governments has been obviated by the use of smart technology: “[s]ince it began in 2014, it has been offering traditional government services, such as notaries, dispute resolution, marriages and voting systems, without the need for a

induced-sovereignty-transfers [<https://perma.cc/6VX6-VZHA>].

⁹⁴ *Understanding Virtual Reality and Augmented Reality*, GCF GLOBAL <https://edu.gcfglobal.org/en/thenow/understanding-virtual-reality-and-augmented-reality/1/> (last accessed Oct. 23, 2023) [<https://perma.cc/E554-PJTM>].

⁹⁵ Babinet, *supra* note 92 (maps used to be controlled by military, now we have access to Apple Maps, Google Maps. Companies like Google have collected incredible amounts of information on the public, etc. and “[p]rivate players could profitably supersede the state and its public services in the functions they traditionally perform.”).

⁹⁶ Yeap Yee Lin, *Digital States: The Case of Statehood Under International Law*, UNIV. OF MALAYA L. REV. LEX;IN BREVE (Aug. 30, 2019), <https://www.umlawreview.com/lex-in-breve/digital-states-the-case-for-statehood-under-international-law> [<https://perma.cc/4DWC-V252>].

⁹⁷ *Become an E-Resident*, REP. OF EST., <https://www.e-resident.gov.ee/become-an-e-resident/> [<https://perma.cc/2WNQ-ESBF>].

⁹⁸ *The Nation State Goes Virtual: 10 Predictions for 2018*, NESTA, <https://www.nesta.org.uk/feature/10-predictions-2018/the-nation-state-goes-virtual/> [<https://perma.cc/JFF9-VZMD>].

middleman.”⁹⁹

However, a system of virtual citizenship does not address where the citizens of the state would actually live. One option advocated before the U.N. has been for other States to take in residents as host countries around the world. The benefit of continued statehood would come at the price of shared physical space. This model assumes that the collective nature of Statehood for the population is the least significant part of being a State. This is not necessarily true. A shared homeland is integral to identity and culture for many, and therefore, this option is unlikely to be popular for those threatened by climate change. However, the expansion of virtual states and virtual reality technology may suggest that in the future, there could be a reality where physical territory is not a requirement for Statehood.¹⁰⁰

2. Maritime Entitlements

Another potential solution is to expand maritime entitlements to floating structures or artificial islands, akin to the ones created by the Maldives. While exiled states may not have claims to land, it is possible they could claim parts of the ocean where they historically had rights: “territory which was once connected to land and then submerged by the sea can continue to be regarded as a connected part of State territory.”¹⁰¹ The rights of coastal States to the ocean surrounding their sovereign land are established by the U.N. Convention on the Law of the Sea (UNCLOS).¹⁰² UNCLOS

⁹⁹ *Id.*

¹⁰⁰ See generally Nelli Ferenczi & Tara C. Marshall, *Exploring Attachment to the “Homeland and Its Association with Heritage Culture Identification*, 8 PLOS ONE e53872 (2013) (describing how the “social construction of one’s nation of origin as an object of primordial attachment renders emotional ties similar to that of kinship,” and that attachment to one’s nation of origin is a predictor of “higher levels of subjective well-being,” heritage culture identification, and psychological wellbeing); see also Laura Notess, *For Indigenous Peoples, Losing Land Can Mean Losing Lives*, WORLD RES. INST. (May 31, 2018), <https://www.wri.org/insights/indigenous-peoples-losing-land-can-mean-losing-lives#:~:text=For%20many%20communities%2C%20especially%20Indigenous,of%20sacred%20and%20cultural%20sites> [<https://perma.cc/RGC2-VZ2P>].

¹⁰¹ *In re Duchy of Sealand*, 80 International Law Reports 683, 685-6 (Administrative Courts of Cologne 1978).

¹⁰² U.N. Convention on the Law of the Sea (UNCLOS), Art. 2. (“The sovereignty of a coastal State extends, beyond its land territory and internal waters and, in the case of an archipelagic State, its archipelagic waters, to an adjacent belt of sea, described as the

measures the maritime zones from the “baseline” of each state, which is essentially the fixed low-tide zone along the coast.¹⁰³ However, it is a principle of both international and maritime law that “the coastal State’s maritime zones and its rights over the sea are a consequence of its sovereignty over the landmass.”¹⁰⁴ For this reason, “artificial 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.”¹⁰⁵

However, it should be noted that “[n]either the [Convention] nor customary international law addresses the impact of a total or partial loss of land territory that may result from sea-level rise on maritime limits.”¹⁰⁶ That said, some have argued that maritime delimitation decisions by international tribunals would be exempt from any changes in sea level rise.¹⁰⁷ Therefore, a potential solution would be for these states to seek advisory opinions from the UNCLOS tribunal in an attempt to permanently fix the delimitation line.¹⁰⁸ Indeed, there are already agreements in existence that use geographical coordinates alone to demonstrate that the parties intended to preserve the boundary “against natural variation.”¹⁰⁹ States might also seek an amendment to UNCLOS so that artificial islands created as a result of climate change are entitled to maritime zones. This amendment would need to be specific, however, out of concern that it would be misapplied by other States looking to improperly encroach on the maritime zones of other States for financial or geopolitical gain.¹¹⁰ Alternatively, if states were willing

territorial sea.”).

¹⁰³ *Supra* note 100, at art. 5.

¹⁰⁴ Vincent P. Cogliati-Bantz, *Sea-Level Rise and Coastal States’ Maritime Entitlements: A Cautious Approach*, 7 J. TERRITORIAL & MAR. STUD. 86, 89 (2020).

¹⁰⁵ *Supra* note 100, at art. 60(8).

¹⁰⁶ Cogliati-Bantz, *supra* note 103, at 92 (quoting U.N. Secretary General).

¹⁰⁷ *Id.* at 96.

¹⁰⁸ *Id.* at 97.

¹⁰⁹ *Id.*

¹¹⁰ See Kristin Huang, *Fortified South China Sea Artificial Islands Project Beijing’s Military Reach and Power, Say Observers*, SOUTH CHINA SEA MORNING POST (Nov. 6, 2022, 2:02 PM) (describing how Chinese artificial islands expands China’s claim to territorial waters in the South China Sea and threaten rival claimants to maritime zones in the area), <https://www.scmp.com/news/china/diplomacy/article/3198504/fortified-south-china-sea-artificial-islands-project-beijings-military-reach-and-power-say->

to permit floating structures like the ones in the Maldives to be entitled to maritime zones, then there could be a change in customary international law over time that could override what is outlined in UNCLOS.

This solution, while potentially time-consuming, would allow citizens of Small Island States to remain on their ancestral lands if land reclamation practices were used to build up existing islands, or at the very least, on artificial islands in their ancestral waters. They could stay connected to their families and communities as well as their existing jobs and livelihoods. Meanwhile, the State would not be forced to cede any of its sovereignty to another State and could best preserve its continued existence within its present borders.

IV. Conclusion

A robust Loss and Damage Fund could provide small States affected by climate change with the financial capital to protect themselves in the short term, which is urgently needed. Though steps were made at COP27 to make the L&D Fund a reality for the first time in history, collective action problems and the desire of wealthy or developed countries to avoid liability for climate change means that the likelihood of concrete plans coming to fruition in the short term is not promising. Moreover, any long-term legal solution to the problem of sinking states is likely to be incremental and costly. Acquiring new territory requires cooperation with other self-interested States who are unlikely to cede territory without either retaining sovereignty over the land or charging a steep price for reducing their own territorial power. That said, even if a small island State could afford to purchase territory elsewhere, it may not be practical for the success and fulfillment of its citizens.

Although territory as a criterion for Statehood may fall out of favor with future generations or policymaking, it is unlikely to be changed immediately. It will require years of state practice to become a norm of customary law, and Small Island States do not have the luxury of time to wait. Therefore, the most viable option is to work within the existing framework of international law and come up with creative solutions for the lack of territory faced by Small Island States. Amending UNCLOS to allow States to claim maritime entitlements to historical land is likely to be the most

advantageous and feasible option so long as limitations are included to prevent other States from building artificial islands to expand their maritime zones. Practically speaking, beyond amending UNCLOS, success hinges on the financial capital of Small Island States to build floating or artificial islands. This is where the urgency for a Loss and Damage Fund becomes apparent: drastic changes will need to be made in the next twenty to thirty years to ensure the continuity of these States. Funds alone are insufficient, but that does not mean the international community should brush off the L&D Fund as an idealistic vision. There is not one quick solution to the problems created by climate change, and international leaders will need to be creative in implementing multiple mechanisms such as loss and damage funds, amendments to laws, or shifts in State practice in order to preserve fellow States into the twenty-second century.