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Abstract

For over two decades, the Alliance of Small Island States (AOSIS) has attempted to craft a funding mechanism that would address loss and damage resulting from climate change. With a steady drumbeat, AOSIS has developed and advocated a three-pronged proposal, emphasizing the need for more robust approaches to (i) disaster risk reduction and management, (ii) risk transfer, that is, shifting risk from one to another through insurance, and (iii) compensation and rehabilitation. Relative to the urgency and enormity of the climate crisis, the overall package is underdeveloped, with some members of the international community expressing reservation or outright resistance to its evolution. Comparatively speaking, however, the former two prongs have received more attention, with risk transfer or insurance being the most developed element of the proposal. As the specter of irreversible, slow-onset events—such as sea level rise, drought, and ocean acidification—looms larger and more concrete, means for rehabilitating vulnerable island states has become particularly important. In this article, Professor Burkett explores the crucial elements of a funding mechanism to address the significant impacts of slow-onset events on small island states and provides a rationale for a compensation and rehabilitation mechanism, as well as a proposed framework for implementing it.

Introduction

For more than two decades, vulnerable small island states have sought a means to preserve their lives and livelihoods under threat of the impacts of climate change. Formally organized as the Alliance of Small Island States (AOSIS), small islands have been the source of many novel approaches to climate governance within the United Nations Framework Convention on Climate Change (hereinafter "Framework Convention" or UNFCCC).[1] Perhaps because of their unique vulnerability to its impacts,[2] AOSIS has led a steady drumbeat for urgent and

1. *See generally* Maxine Burkett, *Climate Reparations*, 10 MELB. J. INT'L L. 509 (Fall 2009) (discussing the history and special status of AOSIS). "Indeed, the particular vulnerabilities SIDS face resulted in special recognition within the *UNFCCC* as well as advanced speaking rights, and a special linkage to climate-related financial assistance." *Id.* at 537. *See also* W. Jackson Davis, *The Alliance of Small Island States (AOSIS): The International Conscience*, ASIA-PACIFIC MAG. (May 1996), *available at* https://web.archive.org/web/20070610034008/http://coombs.anu.edu.au/SpecialProj/APM/TXT/davis-j-02-96.html (stating that since its establishment during the 1990 Second World Conference in Geneva, AOSIS has played a central role in shaping international policy on climate change).
2. Articles 4.8 and 4.9 of the United Nations Framework Convention on Climate Change identify least developed countries and small island states as being the most vulnerable to the adverse effects of climate change. United Nations Framework Convention on Climate Change, May 9, 1992, S. Treaty Doc No. 102-38, 1771 U.N.T.S. 107 [hereinafter UNFCCC].

ambitious methods for arresting, and if not, adapting to climate change to survive some of the worst forecast climate phenomena. With the specter of the most threatening and unavoidable impacts becoming more certain in light of current emissions rates, the calls for mechanisms to address climate-related loss and damage become more compelling. This article seeks to respond to those calls by developing a comprehensive mechanism to compensate small island states that will suffer from devastating slow-onset events, such as encroaching seas, unrelenting heat, and acidifying oceans.

From the earliest days of international negotiation—indeed, prior to the drafting of the Framework Convention—the Small Island Developing States (SIDS) anticipated the need to address the full panoply of climate challenges. In addition to mitigation and adaptation, a method for rehabilitating communities in response to, for example, the atmospheric hazards of increasing heat waves is necessary and especially important for poor and vulnerable countries.[3] It would require, as introduced and explicated by AOSIS over the years, two main approaches. First, the international community would need to reduce the risks of future loss and damage through risk management—that is, by avoiding or minimizing climate impacts—in addition to climate change adaptation and mitigation.[4] Second, states would need to address loss and damage at the time of its occurrence, now and into the future. AOSIS's proposal, referenced in the Framework Convention and widely supported by developing countries with growing developed countries' support,[5] conceives of and constructs an international

3. Malia Talakai, *Climate Conversations—Small island states need action on climate loss and damage*, THOMSON REUTERS FOUNDATION (Aug. 30, 2012, 11:40 GMT), http://www.trust.org/item/?map=small-island-states-need-action-on-climate-loss-and-damage/.

4. UNFCCC, Subsidiary Body for Implementation, A literature review on the topics in the context of thematic area 2 of the work programme on loss and damage: a range of approaches to address loss and damage associated with the adverse effects of climate change, Note by the Secretariat, at 4-5, 37th Sess., Nov. 26–Dec. 1, 2012, U.N. Doc. FCCC/SBI/2012/INF.14 (Nov. 15, 2012) [hereinafter SBI Review].

5. *See* Kim Chipman & Alex Morales, *Islands Seek Funds for Climate Damage at UN Discussions*, BLOOMBERG (Dec. 4, 2012, 3:29 AM), http://www.bloomberg.com/news/2012-12-03/islands-seek-funds-for-climate-damage-at-un-talks.html (citing EU Climate Commissioner Connie Hedegaard's statement that the 27-member bloc has been supportive of the concept, though there are some reservations on how to proceed). Hedegaard explained, "We think that it's not really mature enough yet to say this is exactly how we do it. We need some more work on that, but we have signaled very clearly to them that we are open to find a solution on loss and damage." *Id.* Given staunch opposition to the proposal in the past, the fact that Loss and Damage took a central role in the Doha climate negotiations took many by surprise. *Loss and Damage Reflects New Era of the Climate Talks*, ALLIANCE OF SMALL ISLAND STATES (Apr. 15, 2013), http://aosis.org/loss-and-damage-reflects-new-era-of-the-climate-talks/. The Doha decision called on the UNFCCC secretariat to carry out a number of activities that it must complete before the 39th session of the Subsidiary Body for Implementation, including an expert meeting in the fall of 2013 and the provision of technical papers on both the noneconomic losses related to climate change and the gaps in existing institutional arrangements relative to Loss and Damage. UNFCCC Conference of

mechanism, building on initial calls for an insurance mechanism for vulnerable island states, with which they can access funds immediately after a disaster. That initial insurance proposal has evolved into a multi-pronged mechanism that also includes provisions for disaster risk management and—for climate impacts that are unavoidable and irreversible[6]—compensation and rehabilitation. Now more than ever, AOSIS seeks integration of this proposal into the ongoing UNFCCC negotiations.[7]

To date, the compensation and rehabilitation portion of the proposal has not received sufficient explication.[8] Indeed, to the extent member states and researchers have considered it, the entire discussion of compensation has been hobbled by concerns regarding lack of political will and donor fatigue, at best, and explicit rejection of any measure that might vaguely resemble climate-related reparations, at worst.[9] Indeed, some developed states have clearly expressed their distaste for any proposal that "may have the potential to create open-ended financial and legal liabilities."[10] Nevertheless, anticipating the increasing need to

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the Parties, 18th Sess., Decision 1/CP.18, U.N. Doc. FCCC /CP/2010/7/Add.1, (Feb. 28, 2013). For a discussion of the relevance of the Doha decision to the CRC and other Framework Convention initiatives on loss and damage, see *infra* Part III.A.

6. Five Pacific Island states are listed as both small island developing states and least developed countries. They are Kiribati, Samoa, Solomon Islands, Tuvalu, and Vanuatu. Erika J. Techera, *Climate change, legal governance and the Pacific Islands: an overview*, *in* CLIMATE CHANGE AND INDIGENOUS PEOPLES: THE SEARCH FOR LEGAL REMEDIES 339, 344 (Randall S. Abate & Elizabeth Ann Kronk eds., 2013).
7. *See* discussion *infra* Part I.B.
8. It also falls beyond the purview of other, related UNFCCC institutions. *See* Alliance of Small Island States, Montego Bay, Jamaica, Mar. 10-12, 2013, *Informal Dialogue on Loss and Damage*, 6 [hereinafter AOSIS Dialogue] (citing existing UNFCCC institutions which were seen as having responsibilities that were relevant to loss and damage including, *inter alia*, the Conference of Parties, the Adaptation Committee, and the National Adaptation Planning Process). As explained *infra* Part III, because the compensation mechanism would respond to phenomenon to which communities cannot adapt, the Green Climate Fund, would also not be an appropriate venue for a compensation mechanism. *See* GREEN CLIMATE FUND, www.gcfund.net (last visited July 23, 2013) (the "Fund will promote the paradigm shift towards low-emission and climate-resilient development pathways by providing support to developing countries to limit or reduce their greenhouse gas emissions and to adapt to the impacts of climate change, taking into account the needs of those developing countries particularly vulnerable to the adverse effects of climate change.").
9. Kim Chipman, *Global Warming 'Damages' Spur Rift at UN Climate Treaty Talks*, BLOOMBERG (Dec. 7, 2012), http://www.bloomberg.com/news/2012-12-07/global-warming-damages-spur-rift-at-un-climate-treaty-talks.html (quoting U.S. negotiator, Jonathan Pershing, stating that the U.S. doesn't approve of any "liability-based structure"); Chipman & Morales, *supra* note 5 (quoting Saleemul Huq, a Bangladeshi scientist based in London's International Institute for Environment and Development, who explained that U.S. State Department Envoy Todd Stern dodged a question on the matter after arriving at COP 18 in Doha, saying there are "some issues that are of concern there, but I don't want to weigh into that without being certain").
10. Chipman & Morales, *supra* note 5. Huq explains, "Developed countries hear that phrase, 'loss and damage,' and they think of an international fund for compensation and liability—taboo subjects

seek aid or recompense for climate impacts, scholars and researchers have considered the possibility of a compensation mechanism and its legal and theoretical underpinnings.[11] Even without a viable legal hook,[12] however, there are numerous reasons for developed countries to agree to establish a compensation mechanism.[13] With a sound rationale for a non-retributive compensation mechanism, discussed in Part III,[14] there is also significant precedent in international practice, namely in the United Nations Compensation Commission (UNCC), that provides a useful blueprint for constructing a funding mechanism with the scale and sophistication to meet the SIDS' needs.

To advance the proposal for compensation and rehabilitation under the UNFCCC, this article explores in detail the feasibility and structure of an ambitious mechanism to compensate small island states at the advent of slow-onset events. Nested within the Framework Convention governance infrastructure and administered through the UNFCCC Secretariat, the Small Islands Compensation and Rehabilitation Commission (hereinafter CRC) would disburse monies from a global pool to aid in rehabilitating individuals, communities, and countries affected by sea-level rise, ocean acidification, and other devastating slow-

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for them. There's strong push back. The U.S. has said there is no way they are going to do it." *Id.* The U.S. approach contrasts with other more balanced responses from developed countries. U.K. Energy Secretary Ed Davey stated, "We should be cautious about saying we are strictly liable for some particular event or some particular change. That does not mean we should not work with others to help some of the very poorest adapt to the impacts of climate change." *Id.*

11. *See, e.g.*, Ilona Millar et al., *Making Good the Loss: An Assessment of the Loss and Damage mechanism under the UNFCCC Process*, in THREATENED ISLAND NATIONS: LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE 433 (Michael B. Gerrard & Gregory Wannier eds., 2013) (exploring the legal basis for a loss and damage mechanism and providing an overview of the component elements that might respond to unavoidable impacts, including migration); Daniel Farber, *The UNCC as a Model for Climate Compensation, in* GULF WAR REPARATIONS AND THE UN COMPENSATION COMMISSION 242 (Cymie R. Payne & Peter H. Sand eds., Oxford 2011) (citing the asymmetry between carbon emitters and "climate victims" and stating that compensation claims are inevitable, and therefore, discussions of compensation are not "merely academic"). Professor Farber sketches out the loose contours of an international compensation mechanism in this chapter, *id.* at 242-57, but does not provide more than a preliminary thought-piece on the topic. *See also* Melissa Farris, *Compensating Climate Change Victims: The Climate Compensation Fund as an Alternative to Tort Litigation*, 2 SEA GRANT L. & POL'Y J. 49 (Winter 2009/2010) (introducing a no-fault compensation fund as an alternative to tort litigation to compensate the victims of climate change).

12. *See generally* Maxine Burkett, *A Justice Paradox: On Climate Change, Small Island Developing States, and the Quest for Effective Legal Remedy*, 35 U. HAW. L. REV. 633 (2013) [hereinafter Burkett, *A Justice Paradox*].

13. The need to persuade the developed world to agree to rehabilitation is the result of long-standing global North-South dynamics that consistently and systemically debilitate the global South. For a trenchant discussion of this dynamic in the context of human rights and environmental justice, see Carmen G. Gonzalez, *Human Rights and Environmental Justice: the North-South Dimension*, 13 SANTA CLARA J. INT'L L. 151 (2015).

14. *See* discussion *infra* Part III.

onset events. Modeled on the UNCC, the CRC would operate consistent with clearly laid out claims categories and coordinate payouts triggered by the crossing of agreed on thresholds. Although AOSIS has not limited its proposal to benefit small islands alone, this article structures the CRC around the needs and vulnerabilities—as well as the possibilities for rehabilitation—of small islands. It demonstrates the feasibility and grave need to introduce and implement it. Further, it argues that the CRC might break a logjam between the highest emitters and the most vulnerable states. Instituting a formal compensation mechanism would allow member countries to condition establishment of the CRC on the waiver of legal liability pursuant to terms agreed on when crafting and implementing the commission. This may well quell the liability fears of certain developed countries and allow reasoned and collaborative discussion about funding for slow-onset events to proceed.

This article proceeds as follows. Part I provides more detailed background regarding small islands' particular vulnerability to climate change. That vulnerability has inspired longstanding and concerted efforts to push the level of rigor and commitment from other UNFCCC signatories. The proposal for a funding mechanism to aid during times of disaster has matured over the years, with insurance receiving the greatest amount of attention and illumination. Part I concludes by considering the possibilities and limits of an insurance mechanism to address the unique challenges of slow-onset events.

After demonstrating that insurance cannot adequately reach beyond the demands of certain risks, Part II seriously engages the promise of a rehabilitation mechanism, based on the United Nations Compensation Commission, to address loss and damage resulting from slow-onset events. The Security Council established the UNCC when Iraq's invasion and occupation of Kuwait ceased in 1990.[15] Although the initiating circumstances were quite different, the means for compensating victims of the aggression are uniquely relevant and more easily adaptable to current climate-related circumstances.[16]

Part III details the key elements of the Small Islands Compensation and Rehabilitation Commission after clearly stating the rationale for its creation as

15. S.C. Res. 687, ¶ 18, U.N. Doc S/Res/687 (Apr. 8, 1991).

16. *See* Farber, *The UNCC as a Model for Climate Compensation*, supra note 11, at 242-57 (asserting that international legal communities' successful experience with the UNCC's multilateral compensation mechanism would make obtaining agreement on adapting these approaches much easier than proposing a different one that lacked even a successful record of application). *See also* Won Kidane, Commentary, *Civil Liability for Violations of International Humanitarian Law: The Jurisprudence of the Eritrea-Ethiopia Claims Commission in the Hague*, 25 WIS. INT'L L.J. 23, 35 (2007) (noting that although notable differences exist, the Commissions benefited from the experiences of the UNCC with respect to claims categorization and adjudication).

well as the guiding principles for its fair, equitable, and efficient operation. The article concludes with a discussion of the CRC's benefits to small islands as well as the global community at large, which weighed against the possible drawbacks, militates in favor of the rapid establishment of this element of AOSIS's comprehensive proposal.

I. Climate Change and AOSIS

A. Climate Present and Future for AOSIS Member Countries

1. AOSIS Country Vulnerability

A brief introduction to the AOSIS member states quickly reveals their heightened interest in the health and rigor of the Framework Convention. The Alliance is a "coalition of small islands and low-lying coastal countries that share similar development challenges and concerns about the environment, especially their vulnerability to the adverse effects of global climate change."[17] Within the UN system, AOSIS functions as an *ad hoc* lobbying and negotiating voice for SIDS,[18] advocating on behalf of roughly 59 million citizens of 44 States and observer countries from across the globe, including the Pacific, Indian, and Atlantic oceans as well as the Mediterranean, Caribbean, and South China Seas.[19] These low-lying coastal states share similar challenges to sustainable economic development, including: geographic isolation, limited resources, dependence on international trade, and pre-existing vulnerability to natural disasters.[20] Further, although their GDPs vary wildly in some cases,[21] most of these countries are

17. *About AOSIS*, ALLIANCE OF SMALL ISLAND STATES, http://aosis.org/about-aosis/ (last visited Jan. 5, 2015).
18. *Id.*
19. AOSIS member countries include: Antigua and Barbuda, Bahamas, Barbados, Belize, Cape Verde, Comoros, Cook Islands, Cuba, Dominica, Dominican Republic, Fiji, Federated States of Micronesia, Grenada, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands, Mauritius, Nauru, Niue, Palau, Papua New Guinea, Samoa, Singapore, Seychelles, Sao Tome and Principe, Solomon Islands, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Timor-Leste, Tonga, Trinidad and Tobago, Tuvalu, and Vanuatu. Observers include: American Samoa, Netherlands Antilles, Guam, U.S. Virgin Islands, and Puerto Rico. *See Members*, ALLIANCE OF SMALL ISLAND STATES, http://aosis.org/members/ (last visited July 10, 2013). Thirty-seven are active members of the UN, constitute approximately 28 percent of developing countries, and 20 percent of the UN's total membership. *About AOSIS*, *supra* note 17. Together, SIDS communities constitute roughly five percent of the global population. *Id.*
20. *About SIDS*, SIDSNET, http://www.sidsnet.org/about-sids (last visited July 14, 2013).
21. For instance, Singapore's GDP per capita is the highest at $61,400, whereas Guinea Bissau's is $1,200. *The World Factbook,* CENT. INTELLIGENCE AGENCY, https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html?ga=1.188844395.154334249.1412394817 (last visited Oct. 9, 2014).

middle- or low-income countries, and five also rank among the least developed in the world.[22]

AOSIS countries also have notable vulnerability to climate extremes.[23] The Pacific islands are situated in one of the most natural disaster prone regions and are highly susceptible to—among other disasters—floods, droughts, and tropical cyclones.[24] All SIDS are especially vulnerable to sea-level rise. In the Caribbean, for example, about 70 percent of the population lives on the coast, and regional experts expect that many will have to relocate away from the coasts.[25] In addition, predicted sea-level rise of roughly 3.3 feet by 2100 would "wreak havoc on the region's tourist areas,"[26] flood airports, destroy resorts, and—as is already happening—deepen the damage of saltwater intrusion on vital crops.[27] Atoll nations, such as the Marshall Islands, are already experiencing high tides, or "king tides," that surge over sea walls, repeatedly flooding its capital.[28] In the summer of 2013, in an unfortunate coincidence, the tides exacerbated the crisis situation in the northern atolls resulting from devastating drought, which damaged or destroyed local food crops, depleted water tanks, and rendered groundwater unsuitable for human consumption because of high salinity.[29]

SIDS' climate vulnerability is not only the result of the unique exposure to climate extremes but also of the severe impacts that these natural hazards mete on local and national economies. Like many countries, a great proportion of SIDS' economic activity occurs at the coastline, which is particularly true for tourist dependent island nations. For example, 90 percent of Jamaica's gross domestic product is generated within the coastal zone.[30] Accordingly, any risks to coastal

22. Techera, *supra* note 6, at 344.
23. Intergovernmental Panel on Climate Change, Special Rep., *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, 1-19 (2012) [hereinafter IPCC], *available at* https://www.ipcc.ch/pdf/special-reports/srex/SREX_Full_Report.pdf.
24. *Pacific Islands: Disaster Risk Reduction and Financing in the Pacific*, THE WORLD BANK, http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:23176294~menuPK:141310~pagePK:34370~piPK:34424~theSitePK:4607,00.html (last visited July 17, 2013).
25. David McFadden, *Coastal living in Caribbean likely doomed due to sea-level rise*, E&E PUBLISHING CLIMATEWIRE (May 9, 2013), http://www.eenews.net/climatewire/stories/1059980837/search?keyword=coastal+ living+in+caribbean+likely+doomed+due+to+sea+level+rise.
26. *Id.*
27. *Id.*
28. Paul Brown, *Simultaneous Disasters Batter Pacific Islands*, CLIMATE NEWS NETWORK (July 5, 2013), http://www.climatecentral.org/news/simultaneous-disasters-batter-pacific-islands-16171.
29. *Id.* (explaining that normally, the scant fresh water supplies are topped up from frequent evening rains, however, a devastating drought, which the locals blame on climate change, has reduced a desperate population to rationing water supplies to a liter a day).
30. U.N. Framework Convention on Climate Change, Jamaica's Initial Climate Change Technology Needs Assessment, 18, http://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/TNR_CRE/e9067c6e3b97459989b2196f12155ad5/4ccc885176b94f949b83ed4b294061dc.pdf (last visited Jan. 3, 2015). In fact, SIDS are the most at risk when losses, that is, economic damage from natural

activity will have significant consequence. Not surprisingly, extensive data and a general consensus demonstrate that "developing countries are more economically vulnerable to climate extremes."[31] There are several reasons for this increased vulnerability, including: "less resilient economies" that depend more on natural capital and "climate sensitive activities" such as cropping and fishing; poor preparation for physical hazards; and an "adaptation deficit resulting from the low level of economic development and a lack of ability to transfer costs through insurance and fiscal mechanisms."[32] Accordingly, industrialized countries possess the highest income and account for most of the total economic and insured disaster losses, while fatality rates as well as losses as a proportion of GDP are greater in the developing world.[33] For SIDS, a single disaster has immense ripple effects, severely stressing public financial resources,[34] if not dwarfing annual GDP.[35] As evidenced by Fiji in 2010,[36] consecutive natural disasters in a short period of time multiplies the magnitude of losses and recovery demands and decreases overall socio-economic development.[37]

2. Climate Forecasts, Novel Slow-onset Events, and Loss and Damage

The climate forecast for SIDS is equally troubling. Changes in the "frequency, intensity, spatial extent, duration, and timing of climate extremes" can result in

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disasters linked to rising global temperatures over coming decades, are compared against GDP. Nathanial Gronewold, *US and China Most Exposed to Costs of Climate-Related Disasters*, E&E PUBLISHING CLIMATEWIRE, (Mar. 13 2009), http://www.eenews.net/climatewire/2009/03/13/stories/75480.

31. IPCC, *supra* note 23, at 265.
32. *Id.*; *see also* Millar et al., *supra* note 11 (stating that losses due to natural disasters in developing countries are 20 times greater as a percentage of GDP than in industrialized countries owing to the lack of risk transfer and risk sharing mechanisms, and consequently, the reliance on financial assistance from donor countries to respond to extreme events).
33. *See* IPCC, *supra* note 23, at 5. Regarding disaster related deaths, from 1970 to 2008 over 95% of deaths from natural disasters occurred in developing countries. *Id.* at 9. "The relative economic burden in terms of direct loss expressed as a percentage of GDP has been substantially higher for developing states." *Id.* at 270.
34. *Id.* at 266.
35. *See id.* at 270 ("In small exposed countries, particularly small island developing states, these wealth losses expressed as a percentage of GDP and averaged over both disaster and non-disaster years can be considerably higher, exceeding 1% in many cases and 8% in the most extreme cases over the period from 1970 to 2010 (World Bank and UN, 2010), and individual events may consume more than the annual GDP (McKenzie et al., 2005)."). *See also* Techera, *supra* note 6, at 351.
36. *See, e.g.*, Map from U.N. Office for the Coordination for Human Affairs, Natural Disasters and Other Events Being Monitored by the OCHA Regional Office for the Asia Pacific (Mar. 17–23, 2010), *available at* http://reliefweb.int/map/fiji/asia-pacific-region-natural-disasters-and-other-events-being-monitored-ocha-regional-offi-0.
37. IPCC, *supra* note 23, at 266.

"unprecedented" events.[38] Further, "the crossing of poorly understood climate thresholds cannot be excluded, given the transient and complex nature of the climate system."[39] In other words, scientists anticipate that the known climate-related impacts are set to shift in extreme and novel ways. And, the biggest surprises, though not fully understood, may well come to pass. The IPCC's Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX) links anthropogenic activities to known climate extremes, including sea-level rise. Further, it has identified effects like sea-level rise as inevitable.[40] Whereas some climate impacts are avoidable, either through mitigation or adaptation, many are no longer.[41] These unavoidable impacts are ones that cause significant damage regardless of future measures taken to adapt.[42] In addition to land lost to sea-level rise,[43] for example, agricultural land lost to persistent drought,[44] human health impacts of increasing heat events,[45] and the entire collapse of the fishing industry due to increased ocean

38. *Id.* at 7.
39. *Id.* at 8 ("Assigning 'low confidence' for projections of a specific extreme neither implies nor excludes the possibility of changes in this extreme.").
40. *See, e.g.*, *id.* (general discussion on the rise in sea levels); *see also* UNFCCC, Subsidiary Body of Implementation, Views and Information on Elements to be Included in the Recommendations on Loss and Damage in Accordance With Decision 1/CP.16, at 28, U.N. Doc. FCCC/SBI/2012/MISC.14 (Sept. 28, 2012), *available at* http://unfccc.int/resource/docs/2012/sbi/eng/misc14.pdf [hereinafter SBI Views & Information].
41. Roda Verheven and Peter Roderick identify three types of climate change damage: avoided, not avoided, and unavoidable. Avoided damages are those for which mitigation of emissions or timely implementation of adaptation measures were successful. Not avoided damages are damages that occur because of insufficient mitigation efforts and delays in accessing adequate adaptation funding or technology or challenges in institutional capacity. RODA VERHEYEN & PETER RODERICK, WWF-UK CLIMATE CHANGE PROGRAMME, BEYOND ADAPTATION: THE LEGAL DUTY TO PAY COMPENSATION FOR CLIMATE CHANGE DAMAGE 11 (Nov. 2008), *available at* http://assets.wwf.org.uk/downloads/beyond_adaptation_lowres.pdf.
42. *Id. See also* SBI Review, *supra* note 4, at 24 ("The countries with the highest levels of residual risk are those that will be the least able to manage loss and damage in the future. They are also the countries that may be in need of the greatest support to manage loss and damage.") (citation omitted).
43. IPCC, *supra* note 23, at 15. In addition to observed changes in extreme coastal high water related to increases in sea level, it is "*very likely* that mean sea level rise will contribute to upward trends in extreme coastal high water levels in the future. . . . The *very likely* contribution of mean sea level rise to increased extreme coastal high water levels, coupled with the *likely* increase in tropical cyclone maximum wind speed, is a specific issue for tropical small island states." *Id.* (emphasis in original). *See also* Mary-Elena Carr et al., *Sea Level Rise in a Changing Climate: What Do We Know?, in* THREATENED ISLAND NATIONS: LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE 15 (Michael B. Gerrard & Gregory Wannier eds., 2013).
44. *See* Mary-Elena Carr et al., *supra* note 43, at 44 (explaining that "[l]onger and more severe periods of drought are of particular concern for SIDS because such periods will reduce both the amount of rainwater collected directly and in the recharge of the freshwater lens").
45. *See, e.g.*, IPCC, *supra* note 23, at 25 (explaining that "[m]odels project substantial warming in temperature extremes by the end of the 21st century. It is *virtually certain* that increases in the frequency and magnitude of warm daily temperature extremes and decreases in cold extremes

heat and ocean acidification[46] all constitute unavoidable damage with which SIDS will have to contend. Not only are their territories and economic engines predicted to face significant challenges, SIDS are home to some of the most vulnerable populations—indigenous peoples,[47] internally displaced peoples, and climate-induced migrants.[48] In sum, there are unprecedented climate impacts that efforts to mitigate have failed to address and measures to adapt will fail to prevent or alleviate. And, there are countries and regions in the crosshairs of these impacts.

3. AOSIS Impacts

AOSIS's early calls for assistance identified the need to consider an expanded spectrum of necessary responses to climate change, anticipating heightened vulnerabilities over time. Beyond efforts to mitigate and adapt, efforts to insure against disaster risks and compensate for unavoidable impacts are also necessary. (Fig. 1). The latter two approaches seek to respond to the current and future loss and damage resulting from climate change-related events, for which mitigation and adaptation by definition are unable to address. Together, loss and damage describe "the actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural

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will occur in the 21st century at the global scale. It is *very likely* that the length, frequency, and/or intensity of warm spells or heat waves will increase over most land areas.") (emphasis in original).

46. *See, e.g.*, *Acidic oceans of the future show extinction*, THE DAILY CLIMATE, July 9, 2013, *available at* http://www.dailyclimate.org/tdc-newsroom/2013/07/future-acidic-oceans (explaining that ocean acidification may create an impact similar to extinction on marine ecosystems; according to a study published in the Proceedings of the National Academy of Sciences,"[t]oday the ocean's pH is lower than anything seen in the historical record in the past 800,000 years, scientists say. As the acidity increases, organisms such as corals, oysters, snails and urchins have trouble pulling minerals from the seawater to create protective shells . . . [the study] buttresses ecologists' fears that such changes could ripple through entire ecosystems—and that ocean acidification could prove as consequential and catastrophic for the globe as any changes in air temperature associated with climate change.").

47. *See, e.g.*, Techera, *supra* note 6, at 346 (explaining that "[s]ea level rise at the very least disrupts Pacific Islanders, who are largely comprised of indigenous peoples living traditional lifestyles at the coastal zone, and at worst will result in the displacement of whole communities").

48. IPCC, *supra* note 23, at 8.

> Disasters associated with climate extremes influence population mobility and relocation, affecting host and origin communities (*medium agreement, medium evidence).* If disasters occur more frequently and/or with greater magnitude, some local areas will become increasingly marginal as places to live or in which to maintain livelihoods. In such cases, migration and displacement could become permanent and could introduce new pressures in areas of relocation. For locations such as atolls, in some cases it is possible that many residents will have to relocate.

Id. at 16; *see also* AOSIS, *Proposal to the AWG-LCA: Multi-Window Mechanism to Address Loss and Damage from Climate Change Impacts* (2008), *available at* http://unfccc.int/files/kyoto_protocol/application/pdf/aosisinsurance061208.pdf [hereinafter AOSIS Proposal] (arguing that to manage climate change effectively, the adaptive frameworks must address all categories, including unavoidable impacts such as migration).

systems."[49] Independently, loss refers to impacts for which restoration is not possible. For example, the total destruction of coastal infrastructure due to sea-level rise or the total collapse of a fishery due to lower ocean pH would constitute a loss. Damage refers to negative impacts for which restoration is possible. Damage to a coastal mangrove forest due to storm surge would fall under this category,[50] and presumably appropriate adaptation efforts or disaster risk management could mitigate or avoid impacts suffered as a result. Both loss and damage interact with human systems,[51] exacerbating their pre-existing socio-economic vulnerability. Both can halt or reverse development and "reinforce cycles of poverty,"[52] with particularly dire consequences for the least developed.

Whereas small islands are experiencing early and devastating climate impacts today, the prospect of future increasing loss and damage is especially concerning,[53] particularly as the world pushes beyond the worst assumptions regarding emissions and exposure variables. Nevertheless, these impacts fall through the gaps in the climate governance regime. The loss and damage discussion seeks to resurrect these critical concerns.

Figure 1. As the impacts of climate change accelerate, mitigation and adaptation are no longer sufficient response categories. For present and future climate-related disasters, risk transfer and sharing mechanism can aid recovery by rapid disbursement of funds. Compensation should round out the expanded list of response categories. For residual damage, for which adaptation is not possible, a funding mechanism to compensate and rehabilitate damage victims is necessary.[54]

49. SBI Review, *supra* note 4, at 4 ("Loss and damage includes the effects of the full range of climate change related impacts, from increasing (in number and intensity) extreme weather events to slow onset events and combinations of the two.").
50. *Id*. at 3, 23.
51. *Id.* at 5 ("[F]or example, sea level rise and glacial melt result from climate change stimuli, and these shifts in natural systems in turn result in loss and damage in human systems, such as loss of habitable land or freshwater.").
52. *Id.*
53. *Id.* ("Future loss and damage is likely to increase, especially considering non-economic factors and the interlinkages of phenomena leading to cascading, transnational effects.").
54. *See also* Richard S. J. Tol & Roda Verheyen, *State Responsibility and Compensation for Climate Change Damages: A Legal and Economic Assessment*, 32 ENERGY POL'Y 1045, 1109-30 (2004).

In small island states, the civil engineering plans typical of adaptation projects funded by the undercapitalized Adaptation and Green Climate Funds will not suffice.[55] At some point, the seawalls of the Maldives and Tuvalu will fail so consistently and completely that communities and countries will need compensation for rehabilitation from losses incurred. Further, for SIDS, the cascading effect of disrupted customary institutions and subsistence lifestyles, which have aided resilience to climate variability in the past, could mean the loss of whole cultures.[56]

For the present and forecasted climate impacts, the response regime is deeply flawed and will soon become wholly inadequate. Presently, SIDS rely on *ad hoc* requests for disaster aid when a devastating event occurs.[57] These *ad hoc* measures are often slow to arrive. They also increase the likelihood of funders and communities introducing maladaptive measures in the wake of disaster recovery. As explained by the IPCC, "[a]n emphasis on rapidly rebuilding houses, reconstructing infrastructure, and rehabilitating livelihoods often leads to recovering in ways that recreate or even increase existing vulnerabilities, and that preclude longer-term planning and policy changes for enhancing resilience and sustainable development."[58] For all of these reasons, AOSIS has concluded that the absence of a comprehensive loss and damage mechanism for the most vulnerable is a "gaping hole" in the Framework Convention process.[59]

Figure 2
Costs and benefits of different approaches to address loss and damage

Source: Young (2009), adapted from Economics of Climate Adaptation Working Group (2009).

55. *See generally* Burkett, *Climate Reparations*, *supra* note 1.
56. *See* Techera, *supra* note 6, at 347 (citing the IPCC's acknowledgement of cultural impacts having deeper effects than first appears through the damaging of culturally-informed flexibility and resilience).
57. *See* Millar et al., *supra* note 11, at 438 (explaining that owing to the lack of risk transfer and sharing, developing countries are reliant on financial assistance from donor countries to respond to extreme events); *see also* Brown, *supra* note 28.
58. IPCC, *supra* note 23, at 10.
59. SBI Views & Information, *supra* note 40, at 4. This hole has existed in spite of consistent (w.c.)

B. The Multi-Window Mechanism to Address Loss and Damage

To fill the hole in the Framework Convention, AOSIS has crafted a proposal for a multi-window mechanism to address climate-related loss and damage. The proposed international mechanism would sit under the UNFCCC and have three distinct but complementary components. The insurance component would help SIDS and other vulnerable developing countries manage financial risk from increasingly frequent and severe extreme weather events in a timely manner. Today, commercial insurance is inaccessible for many SIDS or increasingly costly.[60] The rehabilitation and compensatory component would address "progressive negative impacts of climate change, such as sea-level rise, increasing land and ocean temperatures, and ocean acidification."[61] These are the unavoidable, or residual, risks discussed in Part I.A. The risk management component would facilitate and inform the prior two components by supporting and promoting risk assessment and management tools.[62] AOSIS imagines all three components as interdependent and essential to the integrated approach for anticipating risk, transferring and sharing risk, and rehabilitating communities through disaster risk management, insurance, and compensation respectively.[63]

The AOSIS proposal is particularly disadvantaged by the inclusion of a compensation mechanism, however, even if one considers the ostensible lethargy and intransigence that have generally impeded elements of the UNFCCC process. Whereas disaster risk management and insurance may comport with many stated and aspirational goals[64] of the Convention as well as the inclination of many

attempts to fill it. For a full chronology of attempts to advance AOSIS's loss and damage proposal at the UNFCCC, see Alliance of Small Island States, Loss and Damage in the UNFCCC Process—Workshop on the AOSIS Proposal, New York, New York, May 16–18, 2013 (on file with author) [hereinafter AOSIS Expert Meeting]; AOSIS Dialogue, *supra* note 8; AOSIS, *Loss and Damage Briefing*, 2012 [hereinafter AOSIS Briefing]; AOSIS Proposal, *supra* note 48; UNFCCC, Conference of the Parties, 18th Sess., Decision 3/CP.18, U.N. Doc. FCCC/CP/2012/8/Add.1 (Feb. 28, 2013) [hereinafter COP 18, Decision 3].

60. *See* AOSIS Proposal, *supra* note 48.

61. AOSIS Briefing, *supra* note 59, at 1.

62. *See* AOSIS Proposal, *supra* note 48, at 4 (explaining that the risk management component would provide technical and financial support for "advice and assistance to countries on risk management techniques, facilitate the provision of support for the collection of weather data and analysis, provide support to risk assessments, identify hazards, recommend appropriate investments in risk reduction and assist in building capacity to manage climate-related risk and reduce risk exposure"). The funding for this component could come from the Adaptation Fund. *Id.* This proposal, and the loss and damage discussion generally, has gained some traction in the most recent UNFCCC meetings. See discussion *infra* Part III. *See also* COP 18, Decision 3, *supra* note 59; AOSIS Dialogue, *supra* note 8.

63. AOSIS Proposal, *supra* note 48, at 1.

64. *Id.* (citing numerous provisions in the Bali Action Plan the require the Parties to address risk management, including risk sharing and transfer mechanisms such as insurance).

powerful member countries, compensation rings as code for reparations. The theory behind reparations is that wrongful actors should compensate individuals or groups that have been damaged by the wrongful act(s). Linking accountability for these actions with compensation for victims "encodes" conceptions of fairness and rectification of past harm in international law.[65] Accordingly, if a state is responsible for a wrongful act, such as breaking treaty commitments or customary prohibition against transboundary harm, it is required to make reparations through restitution, compensation, or satisfaction.[66]

Although many plausible arguments for reparations based on alleged wrongful acts exist,[67] AOSIS has not expressed any intention to seek legal liability by proposing a compensation component. There are many independent reasons that a funding mechanism for progressive, negative climate impacts would be beneficial for all Framework Convention member countries, particularly the most vulnerable, discussed in greater detail in Part III. Nonetheless, to avoid the "reparations third rail," it might make best sense for AOSIS to proceed without elaborating further on

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65. Richard Falk, *Reparations, International Law, and Global Justice: A New Frontier*, *in* THE HANDBOOK OF REPARATIONS 478, 497 (2006). *See* Factory at Chorzów (Germ. v. Pol.), Merits, Judgment No. 13, 1928, P.C.I.J., Series A, No. 17, 47 ("[R]eparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, damages for loss sustained which would not be covered by restitution in kind or payment in place of it–such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.").

66. *See* Rep. of the Int'l Law Comm'n, 53d Sess., Apr. 23–June 1 & July 2, Aug. 10, 2001, U.N. Doc. A/56/10; GAOR 56th Sess., Supp. No. 10 (2001) [hereinafter ILC]; Joy Hyvarinen, *Climate Change, Transitional Justice and Loss and Damage*, FOUNDATION FOR INT'L ENVT'L LAW AND DEVELOPMENT [FIELD] (June 2013), http://www.field.org.uk/sites/field.org.uk/files/papers/FIELD%20Climate%2C%20TJ%20%26%20loss%20and%20damage%20June%202013.pdf. "The responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act. Injury includes any damage, whether material or moral, caused by the internationally wrongful act of a State." ILC, at art. 31. "Full reparation for the injury caused by the internationally wrongful act shall take the form of restitution, compensation and satisfaction, either singly or in combination, in accordance with the provisions of this chapter." *Id.* at art. 34.

67. *See, e.g.*, Joy Hyvarinen, *Loss and Damage Caused by Climate Change: Legal Strategies for Vulnerable Countries*, FOUNDATION FOR INT'L ENVT'L LAW & DEVELOPMENT [FIELD] (October 2012), http://www.field.org.uk/sites/field.org.uk/files/papers/field_loss__damage_legal_strategies_oct_12.pdf (highlighting new proposals about reparations); Jacob D. Werksman, *Could a Small Island Successfully Sue a Big Emitter?: Pursuing a Legal Theory and a Venue for Climate Justice*, *in* THREATENED ISLAND NATIONS: LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE 409, 409-31 (Michael B. Gerrard & Gregory E. Wannier eds., 2013); Burkett, *Climate Reparations*, *supra* note 1, at 523 (defining climate reparations as "the effort to assess the harm caused by the past emissions of the major polluters and to improve the lives of the climate vulnerable through direct programs, policies and/or mechanisms for significant resource transfers, to assure the ability of the climate vulnerable to contemplate a better livelihood in light of future climate challenges").

the compensation piece. Indeed, novel notions for meeting the needs of slow-onset loss and damage using insurance have arisen.

C. Addressing Slow-Onset Events through "Life" Insurance and the Indispensable Compensation Component

One might understand the unavoidable or residual risks for SIDS as comparable to terminal illnesses. These are forecast eventualities that, despite any attempts to remediate, will occur.[68] In that regard, something like a life insurance policy, under the risk transfer and sharing component, might suffice. Further, it would benefit from the already favorable perception of insurance as a viable and effective approach to loss and damage.[69] Regional models also suggest that the learning curve to create and implement such a scheme may not be as steep when expanded to apply to slow-onset events.[70]

Quite simply, a "life" insurance policy adapted to the circumstances of ocean acidification in the Caribbean Sea, for example, could read as follows:

> In consideration of the payment of the premium of [X dollars], the Y insurance company/facility agrees to pay, upon receipt of due proof of the [agreed upon threshold, such as the collapse of the coral reef system] within one year from the date of the policy,

68. Even if one contributes to the climate "illness" through, for example, poor coastal land use planning in areas already threatened by sea-level rise, the community, country or region will succumb to the slow-onset climate event—though, perhaps more rapidly and painfully. Indeed, vulnerable country contribution to the loss and damage associated with a climate-related disaster is of concern. *See, e.g.*, COP 18, Decision 3, *supra* note 59. This does not argue in favor of no funding or other assistance from the international community; however, it may sensibly militate in favor of a reduced amount of funding or assistance.

69. Risk sharing and transfer mechanisms include micro-insurance, insurance, reinsurance, and national, regional, and global risk pools. IPCC, *supra* note 23, at 10-11. It is generally viewed as an effective resilience measure, and one that can incentivize loss reduction and resilience building activities. *See id.*; Integrated Reg'l Info. Networks [IRIN], *Insurance Only Part of Disaster Resilience, Says Climate Change Panel*, GUARDIAN (Mar. 6, 2013, 11:14 EST), http://www.guardian.co.uk/global-development/2013/mar/06/insurance-disaster-resilience-climate-change. *See generally* Sean B. Hecht, *Climate Change and the Transformation of Risk: Insurance Matters*, 55 UCLA L. REV. 1559 (2008) (examining the incentives that insurance products provide to influence the climate change-mitigating and adaptive capacity-building behavior of policyholders and other actors). *But see* Tom Mitchell, *Seduced by Disaster Insurance? Don't Dive in*, CLIMATE & DEV. KNOWLEDGE NETWORK BLOG (June 19, 2012, 9:00 AM), http://cdkn.org/2012/06/seduced-by-disaster-insurance-dont-dive-in/.

70. The Caribbean Catastrophe Risk Insurance Facility has served as an early model for regional risk pooling. *See* THE CARIBBEAN CATASTROPHE RISK INS. FACILITY, www.ccrif.org (last visited July 23, 2013); *see also* SBI Review, *supra* note 4, at 63-64; Hecht, *supra* note 69, at 1604. Other regional groups have attempted to follow suit, including the Africa Risk Capacity project and the Pacific Catastrophe Risk Assessment and Financing Initiative. *See* Linda Siegele, *Loss and Damage From the Adverse Effects of Climate Change—a SIDS View on Africa*, LOSS AND DAMAGE IN VULNERABLE COUNTRIES INITIATIVE BLOG (June 2012), http://www.loss-and-damage.net/4743.

> the sum of [commercial value of the Caribbean reef system] to the 15 Caribbean countries of AOSIS.

Conceivably, the Caribbean country members would pay a premium to the facility to receive the proceeds of the policy once it matures, which in this context would occur at the time of an agreed upon climate trigger.[71]

Although seemingly straightforward and efficient,[72] there are three chief drawbacks to applying insurance to the progressive and unavoidable events. First, slow-onset events are not compatible with commercial insurance and reinsurance for the most part. Quantifying risk is key to the healthy functioning of insurance markets. Extreme weather events have become important to consider during insurance assessments. They are often hard to predict, however, and they are increasingly costly.[73] Recent UN estimates state that natural disasters over the last three years have caused $100 billion in loss.[74] Second, and related to the prior point, the risk is increasing over time, threatening the long-term availability of commercial insurance.[75] The continuing exit of private insurers in some market areas with "increasingly catastrophic" losses in localities in the developed world, including the United States and the United Kingdom, demonstrates the insurance industry's own vulnerability to climate change.[76] Insurers are declaring an increasing number of regions "uninsurable," and have specifically cited sea-level rise, floods, and ocean warming as being of particular concern.[77] For slow-onset events, the likelihood of occurrence increases over time, which in turn diminishes the utility of insurance as insurers are either unwilling to provide insurance or unable to provide it at an affordable rate.[78] Finally, insurance never adequately

71. The World Bank estimated the potential impact of climate change on all Caribbean Community (CARICOM) countries at $9.9 billion a year, or around 11.3 percent of the region's total GDP. Linda Hutchinson-Jafar, *Caribbean Islands Fear Climate Change Threat to Tourism*, THOMSON REUTERS FOUNDATION (May 4, 2011, 11:41 GMT), http://www.trust.org/item/?map=caribbean-islands-fear-climate-change-threat-to-tourism/.
72. At least when compared to creating a compensation and rehabilitation mechanism.
73. Ilaria Bertini, *Climate Change Is Making Parts of the World Uninsurable*, BLUE & GREEN TOMORROW (June 25, 2013), www.blueandgreentomorrow.com/2013/06/25/climate-change-is-making-parts-of-the-world-uninsurable/.
74. Press Release, United Nations Office for Disaster Reduction, Economic Losses from Disasters Sets New Record in 2012, U.N. Press Release UNISDR 2013/05 (Mar. 14, 2013); Bertini, *supra* note 73.
75. Others have included the absence of responsibility and accountability as a failing of the insurance approach. This point is outside the scope of the current discussion. In fact, considering the political milieu, the compensation and rehabilitation component is most viable if it proceeds without substantial reference or reliance on responsibility beyond the precedent/arrangements already established by the Framework Convention in principles such as "common but differentiated responsibilities."
76. IPCC, *supra* note 23, at 322.
77. Bertini, *supra* note 73.
78. Millar et al., *supra* note 11, at 461; *see also* Mitchell, *supra* note 69 (expressing skepticism about the long term availability of affordable products, if any, via the private sector, particularly in the

covers the full extent of losses, even when particular risks are easier to predict and quantify.[79] "Intangible losses," such as loss of earnings, loss of cultural heritage and identity, and loss of territory and livelihood, are not typically included in insurance products.[80] They will, however, constitute significant losses for SIDS in the long-term climate forecast.

An exploration of the possibilities and limitations of insurance demonstrate the importance of a carefully crafted compensation mechanism. Insurance is not a panacea for climate-related loss and damage for reasons that inhere to risk transfer and sharing mechanisms. These mechanisms are important for the rapid disbursal of funds and serve as an important pillar for resilience to acute disasters, in particular. Beyond those risks, as discussed below, rehabilitation through compensation appears necessary.

II. Completing the Multi-Window Framework: Taking Compensation and Rehabilitation Seriously

The compensation component of the AOSIS proposal may be indispensable. Progressive, negative climate impacts can result in, among other things, the permanent or extended loss of useful land, irreparable damage to coral reefs, damage to water tables, loss of fisheries, and loss of territory with attendant human displacement.[81] These uninsurable, residual risks will yield devastating effects on SIDS and other highly vulnerable nations.[82] The effects might also reverberate well beyond the most vulnerable. AOSIS negotiators argue, "[o]wing to the increased interdependence of the global economy and society, impacts in poor and vulnerable regions could cascade throughout the world."[83] Accordingly, AOSIS maintains that it would be "cost-effective as well as equitable for the international community to contribute to managing these risks"[84] through a

developing world and identifying a recent cap on reinsurance liability in Bangladesh as evidence). Even if available, insurance can also incentivize riskier or maladaptive behavior. IPCC, *supra* note 23, at 11, 322; Mitchell, *supra* note 69; Hecht, *supra* note 69, at 1604; Evan Lehmann, *With Hurricane Season Underway, Lawmakers Want to Overhaul Disaster Spending*, E&E PUBLISHING CLIMATEWIRE (June 13, 2013), http://www.eenews.net/stories/1059982763/print (describing federal disaster approach as maladaptive in the U.S. context).

79. *See* SBI Review, *supra* note 4, at 19 ("The insurance payout, however, does not usually cover the full cost of loss and damage.").
80. Mitchell, *supra* note 69.
81. AOSIS Proposal, *supra* note 48, at 6. Coral reefs, for example, hold significant importance for the tourism industry as well as local communities. In St. Lucia, coral reefs contribute to roughly 20% of the nation's GDP through their benefits for tourism, fisheries, and for protecting shorelines. Hutchinson-Jafar, *supra* note 71.
82. AOSIS Proposal, *supra* note 48, at 6 (citing SBI Review, *supra* note 4).
83. *Id.* at 7.
84. *Id*.

vehicle such as a compensation mechanism.

There is precedent for administering this kind of funding mechanism that demonstrates the viability of the compensation component—at least in theory.[85] Establishing a claims resolution facility could serve as a means for processing and resolving claims made for loss and damage compensation.[86] Typically, these facilities address a large number of claims that require rapid and efficient review.[87] Further, and of great significance to the circumstances at hand, they often serve as alternatives to litigation and enable the conciliator to disaggregate liability from assessment and disbursement of damages.[88] Most important, however, a "theoretical asset" of claims facilities is the ability to tailor the facility to the unique needs of each case.[89] A practical asset is that a climate-related facility can coordinate most effectively the massive data collection and management required to assess damage at large geographic scales for impacts shared by many individuals, communities, and countries.[90] This might also allow for long-term understanding of the loss and damage incurred and of how the facility might better aid in restoring the environment and human communities over time, if it is at all possible.

A. Adapting the United Nations Compensation Commission

Despite different initiating circumstances, the United Nations Compensation Commission is a helpful blueprint to resolve a multitude of climate-related claims

85. AOSIS will continue to contend with political will, suspicion regarding liability and other hurdles. See discussion *supra* Part I.A. and *infra* Part III.A.

86. For a discussion of the purpose and essential elements of claims resolution facilities, see Francis E. McGovern, *The What and Why of Claims Resolution Facilities*, 57 STAN. L. REV. 1361 (2005).

87. *See also* David D. Caron, *The Profound Significance of the UNCC for the Environment*, *in* GULF WAR REPARATIONS AND THE UN COMPENSATION COMMISSION 265, 265-75 (Cymie R. Payne & Peter H. Sand eds., 2011) (stating that a claims body can streamline the recovery effort, and although courts typically focus on individual claims, mass claims process do as well with an eye cast on the larger situation).

88. McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1362. McGovern states that the facilities operate with the assumption that at least some liability exists, but the role of the facility is to focus on "residual damage issues not resolved through litigation or settlement." *Id.* Here, however, I believe that liability should not operate as a major backdrop to the Compensation and Rehabilitation Commission. That said, relative emissions activity will arise when determining the relative contribution of member states. See discussion *infra* Part III.A.

89. McGovern, *The What and Why of Claims Resolution Facilities*, supra note 86, at 1363.

> One of the great assets of a facility for damage-related decisions is its great flexibility to meet the particular needs of a given situation. A design strategy, however, must consider, *ab initio*, all potential consequences of the design choices in order to ensure the predictability of outcomes and the equivalent treatment of claimants.

Id. at 1389. For discussion of predictability and equivalent treatment in the CRC, see *infra* Part III.A.

90. McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1363.

across a broad and diverse claimant pool. At the end of Iraq's invasion and occupation of Kuwait, the Security Council established the UNCC and paved the way for distribution of billions of dollars to compensate millions of claimants from over 100 countries.[91] Through a series of resolutions, the Security Council affirmed Iraq's liability for "any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals, and corporations."[92] The funds came from a percentage of Iraq's oils sales, in accordance with procedures and priorities determined by the Security Council.[93] The UNCC, with the authority of the United Nations, determined the total amount of damages and how to allocate those damages among numerous individual claims.[94] There were six clearly defined claims categories, to which claimants—individuals, corporations, states, and international organizations—could appeal for, in most instances, a predetermined fixed sum. The UNCC Commissioners who ruled on the set of claims presented by claimants were "merely claims' adjustors."[95]

There were other notable elements of the UNCC squarely relevant to compensating small island states. First, the UNCC process was an inquisitorial, rather than adversarial one. In other words, the task of the commissioners was largely fact-finding, based on available evidence and information provided by its own independent experts. Their task was not one of faultfinding.[96] Second, applying horizontal and vertical equity to the rulings was of great importance.[97] In other words, similarly situated claimants who brought claims at the same time were evaluated and compensated equally (horizontal equity). Similarly situated claimants who brought their claims later in time could also expect the Commission to evaluate claims and ultimately compensate equally (vertical equity). Both axes would be critically important to an ongoing climate-based claims facility. Vertical equity would be particularly important for those whose claims will ripen later in time. This is the nature of the slow-onset phenomenon. Finally, as noted in the

91. David J. Bederman, *The United Nations Compensation Commission and the Tradition of International Claims Settlement*, 27 N.Y.U. J. INT'L L. & POL. 1, 1 (1994).
92. *See* Francis McGovern, *Dispute System Design: The United Nations Compensation Commission*, 14 HARV. NEGOT. L. REV. 171, 173 (2009). Iraq agreed to the UNCC in conjunction with the end of hostilities. *Id.* at 177.
93. *Id.* at 171. Payment amount was generally related to punitive intensity and the ability to pay. *Id.* at 173.
94. *Id.* at 176. "The UNCC evaluated each claim individually and the sum of all claims constituted the total damages." *Id.*
95. Bederman, *supra* note 91, at 1 (citation omitted).
96. See *infra* Part III.A.2 for further discussion of the UNCC's inquisitorial process. *See also* Peter H. Sand, *Catastrophic Environmental Damage and the Gulf War Reparation Awards: The Experience of the UN Compensation Commission*, 105 AM. SOC'Y INT'L L. PROC. 430, 431 (2011).
97. *See* McGovern, *Dispute System Design: The United Nations Compensation Commission*, *supra* note 92, at 189.

prior section, the speed and efficiency of the UNCC was unprecedented and remarkable by international standards.[98] It took roughly two years to establish the commission, publish the first set of decisions, distribute claim forms, and appoint the relevant commissioners.[99] The entire claims review process was completed within four years of the Commission's inception.[100] Further, one of the most "significant and underreported success stories of the United Nations" was the UNCC's ability to resolve two and a half million claims filed by individuals for displacement, personal injury, and property damage and loss.[101] This serves as an excellent model for SIDS as they contemplate a system that can absorb the large number of claims that will inevitably arise. And, like all elements of the climate crisis, swift action is essential.

Although seen by some as *sui generis*,[102] there is significant evidence that the UNCC was simply the next iteration of a long tradition of international claims resolution, to which the UN might add the Compensation and Rehabilitation Commission.[103] To the extent that it departed from prior practice,[104] particularly with regard to compensation for environment-based claims, the UNCC paved the way for the well-reasoned inclusion of harms beyond those to marketable resources.[105]

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98. *Id.* at 172.
99. *Id.*
100. *Id.*
101. David Caron & Brian Morris, *The U.N. Compensation Commission: Practical Justice, Not Retribution*, 13 EUR. J. INT'L L. 183, 187-88 (2002).
102. *See* McGovern, *Dispute System Design: The United Nations Compensation Commission*, *supra* note 92, at 177; Bederman, *supra* note 91, at 41 (explaining for reasons not squarely relevant to the CRC that it is doubtful that the UNCC structural model will become the standard for all future claims settlement and providing significant evidence of the UNCC's position in a long, 200-year history of international claims settlement). *Id.* at 1-2 (explaining that although the majority of scholarly opinion has characterized UNCC as novel, it is not as original or as unique as supposed). *See generally id.* (citing distinct claims commission between the United States and Great Britain, between United States and Germany, and between United States and Iran).
103. *See* Bederman, *supra* note 91, at 27 (discussing UNCC is also akin to United States Claims facilities that, although also largely the result of discrete events, establishes the UNCC as consistent with common practice to date); *see also* Daniel Farber, *Basic Compensation for Victims of Climate Change*, 155 U. PA. L. REV. 1605, 1620-21 (2007); McGovern, *Dispute System Design: The United Nations Compensation Commission*, *supra* note 92, at 175.
104. Bederman, *supra* note 91, at 3 ("Although I do acknowledge that the size and scope of the UNCC's undertaking is extraordinary, the Commission's structure and jurisprudence is likely to be completely consistent with historic patterns. In truth, it appears that the UNCC has departed from these trends in only minor ways.").
105. There is also precedent for this in the U.S. context. *See* Farber, *Basic Compensation for Victims of Climate Change*, *supra* note 103, at 1621 ("Under U.S. law, compensation for nonmarket damages to environmental resources clearly exists. The default measure of damages is restoration cost.").

B. Compensating Environmental Harms: Lessons from the UNCC

The UNCC was the first international claims facility to compensate for environmental damage beyond that related to property damage.[106] The invasion and occupation of Kuwait resulted in "unprecedented environmental damage," largely related to the hundreds of oil wells burned and millions of tons of crude oil spilled in the desert and the Persian Gulf.[107] In addition, and particularly relevant to the AOSIS proposal, there were "massive environmental impacts resulting from the influx and transit of thousands of refugees displaced in neighboring countries."[108]

The UNCC's resolution of these claims represented a significant advance for environmental concerns and tracked international law's growing concern with environmental damage that is not readily quantifiable but nonetheless important.[109] International claims facilities have significant experience dealing with environmental claims that are property-based by nature. In other words, there is significant precedent for managing claims resulting from environmental disruption that causes damage to real property, crops, health or other elements of the environment that also have commercial value.[110] The UNCC broadened the scope of compensation to include claims based on "the common concern for the protection and conservation of the environment."[111] This was a novel expansion of the compensable boundaries of environmental harm.

The Working Group charged with elaborating on the contours of the environmental claims category employed quite a broad and flexible interpretation

106. In practice, "the claims of governments regarding the environment were relatively few in number, relatively large in amount and handled in an individualized manner." Hans Van Houtte et al., *The United Nations Compensation Commission*, *in* THE HANDBOOK OF REPARATIONS 321, 324 (Pablo de Greiff ed., 2006). "$5.26 billion of environmental damages (awarded by the UNCC as of June 2005, and disbursed in full as of July 2010) are the largest award ever made in the history of international environmental law." Sand, *supra* note 96, at 430.

107. *Id.*

108. *Id.*

109. *See* Caron, *supra* note 87, at 275; Farber, *Basic Compensation for Victims of Climate Change*, *supra* note 103, at 1620 ("[G]rowing international recognition that 'environmental damages will often extend beyond [what] can be readily quantified in terms of clean-up costs or property devaluation.' Thus, harm to 'environmental values (biodiversity, amenity, etc.—sometimes referred to as 'non-use values') is, as a matter of principle, no less real and compensable than damage to property, though it may be difficult to quantify.") (quoting ILC, *supra* note 66, commentary to art. 36(2), ¶ 15).

110. *See* Caron, *supra* 87, at 267.

111. U.N. Env't Programme [UNEP], *Report of the Working Group of Experts on Liability and Compensation for Environmental Damages Arising from Military Activities*, *in* LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE: COMPILATION OF DOCUMENTS (Alexandre Timoshenko ed., 1998) [hereinafter UNEP]. *See also* Sand, *supra* note 96, at 431; Caron, *supra* note 87, at 268.

of compensable environmental claims.[112] This bodes well for the feasibility of a compensation commission in response to climate change. Although concerned with wartime environmental degradation, the UNCC recognized claims that parallel the circumstances of SIDS vis-à-vis slow-onset events. For example, the abatement and prevention of environmental damage, the reasonable monitoring and assessment of environmental damage for abating harm and restoring the environment, as well as the depletion of and damage to natural resources were all compensable claims that are squarely relevant to vulnerable small islands and AOSIS.[113]

III. The Small Islands Compensation and Rehabilitation Commission

To blunt the disruption and devastation of unavoidable climate impacts, the United Nations should establish the Small Islands Compensation and Rehabilitation Commission (CRC). The CRC would process claims and pay compensation for loss, damage, and injuries to or displacement of individuals and governments that suffer as a direct result of catastrophic slow-onset events. Even though its mandate appears sweeping and ambitious, the UNCC demonstrates its feasibility, and moreover, the CRC is consistent with the stated goals and commitments of the Framework Convention.[114]

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112. UNEP, *supra* note 111.

113. *See, e.g.*, Sand, *supra* note 96, at 430 (noting that many have referred to the UNCC experience as a potential model for environmental claims settlements; however, while "there may be precedential lessons . . . the bulk of UNCC claims (some 90% of over $52 billion awarded)—including thousands of individual claims from Kuwaitis and displaced foreign workers, and huge amounts of corporate business losses—concerned *non*-environmental damage"). *See also id.* at 432 (noting that "[b]oth the jurisprudence and the methodology of the UNCC/F4 Panel are of direct relevance to more recent cases of catastrophic environmental damage," including the 2010 Deepwater Horizon oil spill). *See also* Robin L. Juni, *The United Nations Compensation Commission as a Model for an International Environmental Court*, 7 ENVTL. LAW. 53 (2000) (arguing that elements of the UNCC process provide guidance for the creation of an international environmental court). The inclusion of environmental claims has inspired the application of the UNCC approach in other contexts, including the proposed creation of an international environmental court. *See generally* Keith P. McManus, *Civil Liability for Wartime Environmental Damage: Adapting the United Nations Compensation Commission for the Iraq War*, 33 B.C. ENVTL. AFF. L. REV. 417 (2006) (exploring the modifications that could make the UNCC a successful mechanism for assessing civil liability for wartime environmental damage).

114. *See* AOSIS Proposal, *supra* note 48. AOSIS notes that many elements of their multi-window proposal resonate with recommendations contained in the UNFCCC Technical Paper on Mechanisms to manage financial risk from direct impacts of climate change in developing countries (FCCC/TP/2008/9), and in particular Scheme C, paragraphs 336 and following for a Climate Risk Management Mechanism. *Id.* at 8. Further, "Scheme C aims to provide a long-term approach at the global level and recognizes that support is needed from the international community where underlying risks may be uninsurable due to the high degree of hazard or the inability of the Parties at risk to pay an adequate premium." *Id.*

The CRC would perform three primary functions. It would (i) determine the total amount of damages to award for a given event, such as the collapse of a reef system due to low ocean pH, (ii) allocate payment to relevant claimants, and (iii) develop and manage an innovative system of post-award auditing of larger claims to ensure adequate environmental remediation and inform more sophisticated approaches for later rehabilitation.[115]

A. The Theoretical Basis for the CRC: Guiding Principles and Antecedent Questions

The reasons for crafting and implementing the CRC are legion. Notwithstanding copious arguments for reparations based on liability under international law,[116] there are weighty reasons to establish a compensation commission based on the Framework Convention. There are also sound reasons based on the maintenance of global stability, which is also of great interest to the largest emitters.[117] More than 190 countries established the UNFCCC to meet the many significant demands of slow-onset phenomena. The Framework Convention, at least in theory, sanctions a number of ambitious and viable actions to slow climate change and ease the impacts of unavoidable climate change. It would be naïve to suggest, however, that the Framework Convention can do all it states to do, at least without significant political opposition. That said, its failure, if even partial, portends grave consequences for the global community, including the most intransigent of the largest carbon emitters.

This section notes key recent developments under the UNFCCC that justify

115. Technological facilities would support all three functions of the CRC. For further discussion of this indispensable piece of the CRC and the overall multi-window mechanism, see discussion *infra* Part III.B. David Caron identifies this as one of the key lessons from the UNCC, explaining,

> [G]iven the previous lessons and the assumed presence of a significant disaster, it should likewise be assumed that the claims process extends far into the future. This is particularly the case in terms of any follow-up program where the claims institution monitors the performance of the agent; that is, tracks the execution of an agent's stated plan to address environmental concerns.

Caron, *supra* note 87, at 274.

116. *See e.g.*, Millar et al., *supra* note 11, at 440-41; Tol & Verheyen, *supra* note 54, at 1109-11 (citing the no harm rule and law of state responsibility under customary international law); Burkett, *Climate Reparations*, *supra* note 1; AOSIS Proposal, *supra* note 48 (citing the principle of state responsibility, which requires the cessation of wrongful activity and reparation for damage caused by the wrongful act); UNEP, *supra* note 111, at 119; *see also* ILC, *supra* note 66, at arts. 30-39.

117. UNFCCC, *supra* note 2, at arts. 4.1(e), 4.4, 4.8. ("[T]he Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or impact of the implementation of response measures, especially on . . . [s]mall island countries. . . ."); *see* Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 3(14), Dec. 10, 1997, UN Doc. FCCC/CP/1997/7/Add.2, *reprinted in* 37 ILM 22 (1998); *see also* Millar et al., *supra* note 11, at 438.

imposition of a compensation mechanism. A discussion of guiding principles for the operation of the CRC and a response to important antecedent questions—such as who will fund it, who will benefit, and for what kind of injury—follow.

Though the well-being of small islands has been a stated concern since the UNFCCC's inception, attention to loss and damage at the UNFCCC began in earnest in 2007 with the Bali Action Plan.[118] The Plan called for enhanced adaptation efforts, including strategies and means to address loss and damage in developing countries, particularly for those most vulnerable.[119] In 2010, the Cancun Adaptation Framework noted that approaches to address loss and damage should consider impacts, including sea-level rise, increasing temperatures, and ocean acidification.[120] It further recognized the "need to strengthen international cooperation and expertise in order to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow-onset events."[121] Most recently, Decision 3/CP.18 of the COP 18 meetings in Doha recognizes the importance of the work on loss and damage, including the need to build "comprehensive climate risk management approaches."[122] It also calls for advanced understanding of noneconomic loss and damage, patterns of migration and displacement, and identification and development of approaches to rehabilitate from climate-related loss and damage.[123] Further, the Doha Gateway mandated the formation of "institutional arrangements, such as an international mechanism, including its functions and modalities" for the next COP.[124] Given the staunch opposition the loss and damage proposal has received in the past, it took many by surprise when it assumed a central role in the Doha climate negotiations.[125] Although the proposal has suffered setbacks in the interim, it remains firmly on the agenda.

The equivocation on the part of member countries, particularly large emitters, is

118. UNFCCC, Conference of the Parties, 13th Sess., Decision 1/CP.13, U.N. Doc. FCCC/CP/2007/6/Add.1 (Mar. 14, 2008).
119. *Id.* at ¶ 1(c)(iii). *See also id.* at ¶¶ 1(c)(i), 1(c)(ii), 1(c)(iii) and 1(c)(v) on adaptation, as well as ¶¶ 1(e)(i), 1(e)(ii), 1(e)(iii), 1(e)(iv), 1(e)(v), and 1(e)(vi) on finance and investment.
120. UNFCCC Conference of the Parties, 16th Sess., Decision 1/CP.16, U.N. Doc. FCCC /CP/2010/7/Add.1, (Mar. 15, 2011); *see also* SBI Review, *supra* note 4, at 23.
121. *Id.* at ¶ 25.
122. UNFCCC Conference of the Parties, 18th Sess., Decision 1/CP.18, U.N. Doc. FCCC /CP/2010/7/Add.1, (Feb. 28, 2013).
123. *Id.*
124. *Id*. Although this mandate suffered setbacks in the most recent international meetings in Bonn, a loss and damage mechanism remains a key deliverable. *See* Laurie Goering, *Africa: Vulnerable States Decry Slow Progress at Bonn Climate Talks*, ALLAFRICA (June 17, 2013), http://allafrica.com/stories/201306181411.html.
125. *Loss and Damage Reflects New Era of the Climate Talks*, *supra* note 5.

not surprising, though it may be foolhardy.[126] At the same time that some of the largest emitters resist aggressive climate action at the international scale, there are significant sources suggesting that climate change is a global risk best addressed now. In the United States, the military infrastructure, the Central Intelligence Agency, and numerous nongovernmental organizations have stressed the security and human development risks that climate disruption presents, particularly in the developing world.[127] Similar to the larger discussion regarding international aid, the costs of failed livelihoods, retarded development, and climate-related conflict dwarf the value of each dollar allocated for optimally achievable well-being and security worldwide.[128]

Given the geopolitical risks, a claims resolution facility that serves disaster relief and social welfare goals will aid the most vulnerable as well as the largest emitters.[129] The CRC would provide a social safety net that attempts to meet the fundamental needs of each claimant, thus stunting overall regional and global instability.

1. Guiding Principles

There are several guiding principles that might govern the CRC from conception to implementation. As demonstrated by the UNCC, and discussed in the next section, an expansive and flexible view of compensable harm vis-à-vis environment-based damages is necessary. Further, due to the progressive nature of climate change and our scientific understanding of its complexity, the ultimate impacts and the ability to link them to climate inputs will necessarily shift. For these reasons, it will be especially important that the CRC has clear guiding principles that will allow for consistency across claims over time. This subsection

126. It is not surprising because of stated concerns regarding liability. The two-decade-old mandates of the Framework Convention require climate action along the mitigation to rehabilitation spectrum, thus vitiating the need to determine fault.

127. For example, the Central Intelligence Agency's explains that the effects of climate change "are threat multipliers that will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions—conditions that can enable terrorist activity and other forms of violence." *Quadrennial Defense Review 2014*, DEPARTMENT OF DEFENSE 8 (2014), http://www.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf; *see also* Dan Smith & Janani Vivekenanda, *Climate Change, Conflict and Fragility: Understanding the linkages, shaping effective responses*, INTERNATIONAL ALERT 8 (Nov. 2009), http://www.internationalalert.org/sites/default/files/publications/Climate_change_conflict_and_fragility_Nov09.pdf.

128. *See generally* Barack Obama, Remarks at the United Nations Climate Change Summit in New York City (Sept. 23, 2014), *in* 2014 DAILY COMP. PRES. DOC. 691.

129. McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1365-66 (arguing that a "metaphor or paradigm" for the facility is critical for the public perception of claims resolution). McGovern notes that the "welfare paradigm is that of a social safety net to insure that no fundamental needs are unmet. There is no implication of wrongdoing or malfeasance." *Id.* at 1366.

suggests the following approaches to the CRC's purpose and goals: international solidarity and equity, rough justice, and scientific and technical rigor throughout the life of the commission.

International solidarity and equity is a theoretical hallmark of reparative efforts.[130] In this context, international solidarity captures the overarching notion that the CRC is the product of a collaborative effort of each nation to facilitate the best outcomes for all other nations and their citizens. Demonstrations of solidarity will differ across nations. For the developed world, emerging economies, and the largest present and historical emitters, the principle of common but differentiated responsibilities (CBDR)[131] will still operate. In practice, that might mean that although all nations contribute to a global pool to fund the CRC,[132] the CRC secretariat will calculate contributions based on principles of CBDR, thus requiring more input from the larger emitters. For the most vulnerable, there might be other demonstrations of solidarity, namely the commitment not to pursue liability claims against the largest present and historical emitters.[133] In other words, the CRC would be the repository for all climate-related claims for compensation and rehabilitation between states, and beneficiary states would waive all potential outstanding disputes regarding climate-related reparations from other participating states.[134]

Regarding international equity, some elements of this principle will be easier to execute than others. For example, including all affected parties in the negotiations regarding the creation of the facility through its operation should be straightforward. As with the UNCC, equity at the claims level will also be key. Predictability and transparency in the determination and distribution of damages will ensure horizontal equity and maintain the legitimacy of the CRC.[135] Similarly, with the advent of triggering events likely occurring over a substantial

130. AOSIS Proposal, *supra* note 48, at 3.

131. UNFCCC, *supra* note 2, at art 3.1 ("The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.").

132. See further discussion *infra* Part III.B.

133. The extent to which a claims resolution process precludes a claimant's right to pursue alternative venues for relief is a threshold issue. *See* CONFLICT PREVENTION & RESOLUTION, MASTER GUIDE TO MASS CLAIMS RESOLUTION FACILITIES 115 (2010). Waivers of litigation can come in multiple forms, including, limitation on the type of damages available, limitation on the entities against which claimant's can pursue litigation, and the foreclosure (w.c.) of limitation altogether. *Id.*

134. This commitment would not, of course, preclude claims by countries or their citizens against other viable defendants, such as corporations, in viable fora. *See, e.g.*, Burkett, *A Justice Paradox*, *supra* note 12. This departs from the modern trend toward the principle of non-exclusivity, which countenances claimants bringing claims in alternative forums, in addition to the international claims institution. Bederman, *supra* note 91, at 34.

135. *See* McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1378.

period of time—perhaps even a century or more—this facility will need to operate for quite some time while ensuring equity of treatment over generations, thus ensuring vertical equity. As much as possible the standards of compensation should not change sharply or without clear scientific reasoning.[136] Of course, claims will shift over time. As with any claims resolution facility, flexibility to adapt to changed circumstances is essential.[137] To ensure legitimacy in implementation, internal and external quality control audits governed by the third goal of the CRC[138] will also be critical.

Although the CRC can strive toward an optimal and consistent distribution of funds for rehabilitation, the size of potential claimants and the nature of climate change—marked by unpredictable, stochastic, and accelerating shifts—means that the CRC will fail to adequately compensate all claimants. In fact, short of aggressive mitigation commenced several decades ago, there exist unavoidable and irreversible impacts that make restoration of the *status quo ante* in some cases impossible. Further, assuming full and enthusiastic participation, it is unlikely that countries could sufficiently capitalize the CRC. For these and related reasons, notions of rough justice are relevant. Although the CRC cannot preclude all negative outcomes for small island states, it can, given the circumstances, facilitate better outcomes.

Rough justice has been used to describe the aim of other claims facilities with similarly large and compelling groups of claimants.[139] This principle will be even more relevant in guiding appropriate responses in the climate context.[140] As described by scholar Francis E. McGovern, "'rough justice' embodies the philosophical conflict between fairness and efficiency . . . [; it] errs on the side of efficiency, arguably sacrificing equity in individual cases in order to achieve equity for the whole."[141] According to McGovern, pragmatism was the hallmark of the UNCC, for which the principle of rough justice was integral. To ensure any means of compensation at all, pragmatism will also need to operate for SIDS and the CRC. There will be a large and growing number of claimants appealing for assistance in increasingly dangerous circumstances. Further, and perhaps fundamentally unique to the climate predicament, many of the harms anticipated—including total loss of territory and culture—are largely incalculable. Any attempt at compensation on this front will be more of a gesture rather than an

136. *See* Van Houtte et al., *supra* note 106, at 370.
137. *See* McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1378.
138. See discussion *infra* Part III.B.
139. *See* Caron & Morris, *supra* note 101, at 188.
140. *See* Farber, *Basic Compensation for Victims of Climate Change*, *supra* note 103, at 1608.
141. McGovern, *Dispute System Design: The United Nations Compensation Commission*, *supra* note 92, at 172 n.14.

accurate reflection of the true loss. In this context, therefore, full compensation would be impossible due to insufficient funds, literally and figuratively.

To come close to an adequate and appropriate method for claims resolution, funding for scientific and technological rigor over time will also be essential. This would need to be a core part of a highly disciplined while adaptive organizational structure.[142] In other words, to make any legitimate attempt at identifying triggering events, linking them to the harm experienced by a claimant, and assessing adequate remedy, the CRC administration will require sufficient funding for its technical operations in addition to the ability to compensate satisfactorily. Indeed, the "application of state-of-the-art decision making tools to assist the Commission to reach their decisions" allowed the UNCC to process and pay millions of disparate claims in a remarkably short amount of time.[143] The technical arm would make the following determinations at the inception of the CRC and regularly throughout the life of the commission: it would, *inter alia*, define relevant concepts like "damage due to slow-onset events," "environmental and natural resources damage," and "climate-induced migration;"[144] recommend criteria for valuing the previous climate-related events; and consider the appropriate level of financial compensation.[145]

A variation of this technical component has also been key to the AOSIS proposal.[146] In their proposal for incorporating insurance in the UNFCCC Process, AOSIS recommends learning from the experiences of the Executive Board of the Clean Development Mechanism.[147] In addition to the need to have adequate

142. On the importance of considering the "longitudinal form" of an organization design, see McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1369-70 ("If the claims resolution facility is to allocate a certain sum to claimants over any extended period of time, there will be a disproportionate ratio of administrative cost to damage payments as they facility winds down. Thus, what way be an efficient organization in the early stages of the life of a facility may not be economical as it ages.").

143. McGovern, *Dispute System Design: The United Nations Compensation Commission*, *supra* note 92, at 189. The disaggregation of claims into "digestible segments" also aided in the speedy resolution of claims, according to McGovern. This would be necessary for the CRC as well, discussed *infra* Part III.B.

144. Of course, this determination will be immensely difficult. Defining climate-induced migration, for example, is currently the source of hot academic debate. Maxine Burkett, *Climate-Induced Migration: Is there a there there?*, 3 CLIMATE LAW 314 (2012) (reviewing MIGRATION AND CLIMATE CHANGE (Etienne Piguet et al. eds., 2011)). This is not as difficult an issue for SIDS, as climate-induced migration is more straightforward for these nation-states. *See id.*

145. UNEP, *supra* note 111, at 115.

146. *See* Alliance of Small Island States, Workshop on the AOSIS Proposal, Full Report on Roundtable Discussions, *Insurance in the UNFCCC Process* (Sept. 11, 2009) (on file with author) [hereinafter AOSIS Insurance].

147. Poor funding, uneven participation, and suggestions of poor governance, among other things, have riddled the CDM since its inception. *See, e.g.*, FRIENDS OF THE EARTH, INT'L RIVERS, TRADING IN FAKE CARBON CREDITS: PROBLEMS WITH THE CLEAN DEVELOPMENT MECHANISM (2008), *available at* http://www.internationalrivers.org/files/attached-files/foe_ir_cdm_fact_sheet_final3_10-08.pdf.

funding at the outset, as well as autonomy from investor countries, AOSIS isolates "the need for a technical committee that does the actual work" as an important element for their proposed loss and damage mechanism. This will be critical in real time, but will also be a key part of ensuring the CRC's relevance and effectiveness on an ongoing basis.[148] A scientific and technical arm of the CRC will be a key part of internally reviewing the efficacy of its claims review and disbursement. This arm can establish a method of review to adapt claims criteria or claims processing guidelines to address necessarily changing circumstances.

2. Addressing Antecedent Questions

As contemplated in this article, the Small Islands Compensation and Rehabilitation Commission would follow the precedent of other claims resolutions facilities that have operated under the inquisitorial model of decision-making.[149] Distinct from adversarial procedures that are the hallmark of American litigation and other common law courts, the CRC would emphasize "truth-seeking and participation."[150] To that end, language and culturally appropriate notice to claimants, low access costs through standardized forms[151] or regional offices for claims administration, and direct access to the CRC rather than through counsel will be key features.

Coherent parameters to determine the "who, what, and how much" of the commission will aid the inquisitorial process. Below, I provide preliminary answers to the following antecedent questions: What events will give rise to claims? Who is and is not eligible for compensation? Who will fund the CRC at the outset and throughout the life of the commission? And, because most claims will not ripen until the advent of some climate-related event, when will payouts occur?

Eligible Claims. Generally speaking, loss and damage resulting from slow-onset events for which insurance is inadequate will be eligible for compensation. Similar to the UNCC process, the U.N. Environment Programme could convene a working

148. McGovern explains, "If equity is viewed longitudinally, there may be a similar uneven payment of claims over time. Typically, future claimants are in a disadvantageous position in negotiations today." McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1385; In light of this challenge to vertical equity that inheres to a long-range facility, adequate and consistent funding for administration will be especially important. Defined and acceptable error rates, and a clear mechanism to monitor them, is also important to ensure that the compensation funding is going to those that actually need it. *See id.* at 1387. A commitment to technical rigor can incorporate vigilant fraud prevention in its operation.

149. *See generally id.* at 1368.

150. *Id*. ("The organization is more reminiscent of the inquisitorial model of the courts of equity rather than the adversarial mode of the common law courts.").

151. Again, the UNCC provides precedent for this. *See* Van Houtte et al., *supra* note 106, at 343 ("The standard claim forms designed and distributed by the Secretariat to capture data in a consistent and uniform manner.").

group to draft a comprehensive report to identify the boundaries of compensable claims. Like the UNCC Working Group, it would also be appropriate for the CRC working group to favor broad and "non-exhaustive" definitions of terms.[152] For the UNCC, the "environment" relevant to claimant countries included:

> The land within its boundaries (including subsoil); internal waters (including lakes, rivers and canals); territorial sea (including seabed, subsoil and resources thereof); airspace above its land; and exclusive economic zone and continental shelf to the extent that damage occurred to resources over which it has jurisdiction or sovereign rights in accordance with international law.[153]

Similarly expansive, the Working Group defined "environmental damage" or "impairment to the environment" as "a change which has a measurable adverse impact on the quality of a particular environment or any of its components including its use and nonuse values and its ability to support and sustain an acceptable quality of life and a viable ecological balance."[154] Indeed, claimants might recover for unpleasant circumstances resulting from significant loss. Further, the working group for slow-onset climate compensation, like the UNCC, could conclude that the CRC will determine "adverse impact . . . on a case-by-case basis, taking into account the situation before and after the relevant harmful activity occurred."[155] Finally, and perhaps most relevant to the case at hand, the Working Group defined "other environmental damage" to include recovery for permanent damage, for which restoration was infeasible.[156]

The Cancun Adaptation Framework serves a good starting point on physical impacts for a CRC report. The Framework identified the following as events

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152. Rep. of the Working Group of Experts on Liability and Compensation for Envtl. Damage Arising from Military Activities, U.N. Environment Programme, 7-8, U.N. Doc. UNEP/Env.Law/3/Inf.1 (1996) [hereinafter Report of the Working Group of Experts]. The Working Group adopted equally expansive definitions for "natural resources," "depletion of natural resources," and "damage to natural resources." *See id.* at 122-24. *See also* Juni, *supra* note 113. This will, of course, be a difficult, ongoing task. *See* Report of the Working Group of Experts, at 121 ("[I]t is conceivable that the question of whether damages are direct may not be uniquely apparent. This possibility arises because of the physical interdependence of certain environmental and natural resources, resulting in damage of a type, or other location, which might be too remote to be considered as compensable damage. For these cases, establishing a general rule as to which claims would be too remote to be praised will be a difficult task.").

153. Report of the Working Group of Experts, *supra* note 152, at 123.

154. *Id.*

155. *Id.* The Working Group's "report and conclusions set forth some general principles which may be applicable to all environmental claims, although the question of whether compensation could be awarded in any particular case must depend on its own facts." *Id.* at 116.

156. *Id*. at 128. The primary goal of the UNCC vis-à-vis the environment was restoration. To the extent that restoration or replacement was not possible, monetary damages were in order. *Id.* at 14.

within the scope of any loss and damage mechanism: sea-level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity, and desertification.[157] The causal link between these events occurring and anthropogenic climate change is relatively linear, with sea-level rise, ocean acidification, and increasing sea and land temperatures among the most straightforward. Over time, scientific advances might make it easier to link other slow-onset events to global emissions. Of course, there are many actions that contribute to the damage that sea-level rise and ocean acidification can produce, such as poor coastal land-use planning and inadequate or permissive fisheries management, respectively. The CRC, and particularly its technical arm, will have to make sensible determinations about where climate inputs end and contributory action begins. This would likely be relevant for claims at the government level rather than for individual claims.[158] Finally, the compensation for reasonable monitoring of the further effects of these events would be appropriate, and has significant precedent, including the UNCC.[159]

To the extent that the CRC is limited to SIDS, impacts within terrestrial and marine geographic regions should be relevant to the claimant country or its citizens. The UNCC employed a similar concept with the so-called "compensable area" as a "presumptive indicator of a direct loss."[160] This would aid SIDS as the passing of certain thresholds for sea-level rise or ocean pH in certain regions to facilitate rapid claims resolution and funds distribution. It would be particularly helpful for the efficient resolution of individual claims. If a coastal region is no longer habitable and is within a designated compensable area, all of the inhabitants can file for compensation, with the attendant evidentiary burdens

157 U.N. Framework Convention on Climate Change, Cancun, Mex., Nov. 29-Dec. 10, 2009, Decision 1/CP.16, *The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*, ¶ 25, U.N. Doc. FCCC/CP/2010/7/Add.1 (Mar. 15, 2011).

158. This is the case because, like the UNCC, the CRC will likely disburse a set award for small individual claims. See discussion *infra* regarding claims categories.

159. *See* Report of the Working Group of Experts, *supra* note 152, at 128 (discussion of "reasonable monitoring of environmental damage" and "abatement and prevention measures"). The Working Group concluded that "monitoring and assessment expenditures should be recoverable by governments in respect of damage occurring within their own territory; in some cases this may include monitoring and assessment activities . . . outside of national territory in order to assess potential impacts within territory." *Id. See also* Caron & Morris, *supra* note 101, at 185 (explaining that investigating the possibility of damage is itself compensable); Farber, *Basic Compensation for Victims of Climate Change*, *supra* note 103, at 1647 (explaining that "[a]warding compensation for such preventive measures is supported by the following sources: U.S. toxic tort law as it relates to medical monitoring expenses; UNCC practice, in its use of adaptation measures and the cost of providing alternate ecosystem services; and the preference for replacement damages under CERCLA and other schemes").

160. Caron & Morris, *supra* note 101, at 193.

eased. This might also help ensure that future compensable damage is at least geographically bounded, thus avoiding claims for loss and damage due to remote environmental disruptions with more tenuous causal links to the climate-related slow-onset event.[161]

It is also plausible that the CRC could consider and compensate for intangible, noneconomic losses. Indeed, this was a consideration for the UNCC, which included archaeological and culturally significant artifacts in the broad definition of "environment," with the attendant expectations of remediation.[162] As a symbolic gesture, the CRC can determine a means to compensate and rehabilitate for losses related to loss of culture and territory. Whereas the latter might also include actual monetary compensation for the costs of displacement and lost access to natural resources, the Commission could establish a protocol for addressing the perhaps weightier loss of culture some islanders will likely experience. The UNCC provides precedent for including "cultural heritage, features of the landscape and environmental amenity."[163] This would be especially relevant for Pacific island countries, in which the majority is indigenous with cultures that have retained "profound cultural and spiritual connection" to nature and place.[164]

In sum, the CRC's jurisdiction would extend only to loss and damage suffered that is more likely than not due to slow-onset events.[165] The CRC's technical arm would define these events, consistent with changing scientific knowledge over time. To facilitate this task, the CRC should also coordinate initial funds to support the early establishment of baselines to aid in determining the extent of damage incurred relevant to a fixed point in time.[166]

Eligible Claimants. There are potentially billions of claimants if the eligibility question is not answered clearly and coherently. As mentioned at the outset, this article constructs the CRC around the possible claims of the SIDS. The SIDS alone total almost 60 million people. All may not have claims; however, one can imagine expanding eligible claimants in time if the mission of the CRC also grows to cover

161. A similar limitation was proposed in the context of wartime environmental damage in McManus, *supra* note 113, at 442.
162. *See* Report of the Working Group of Experts, *supra* note 152; *see also* McManus, *supra* note 113, at 442.
163. Report of the Working Group of Experts, *supra* note 152, at 10.
164. *See* Techera, *supra* note 6, at 342-44.
165. *See* Farber, *Basic Compensation for Victims of Climate Change*, *supra* note 103, at 1635-39 (discussing various models to predict the possibility of damages for purposes of compensating climate change victims). Full explication of this piece is beyond the scope of this article.
166. IPCC, *supra* note 23, at 10 ("This would be critical, particularly in light of the dearth of data on "disasters and disaster risk reduction . . . at the local level, which can constrain improvements in local vulnerability reduction."); Sand, *supra* note 96, at 431 (stating that faced with a similar lack of reliable data, "the UNCC started by awarding funds upfront for monitoring and assessment of the damage. Total funding for this purpose amounted to $243.6 million.").

other vulnerable communities. This would be consonant with the goals and spirit of the commission contemplated here. What is clear, however, is that the CRC would exclude countries like China that also have massive coastlines that sea-level rise threatens. They, and others similarly situated, would not be eligible by virtue of their current emissions rate coupled with an enormous economy.

Individual citizens of small island nations would be eligible to bring claims identified above. To avoid the piecemeal presentation of individual claims, and the attendant administrative burdens and possibilities for delay, island governments will file consolidated claims on their citizens' behalf.[167] Mimicking the UNCC process, the CRC would require governments to compile and present their nationals' claims using the governments' own preferred methods and procedures.[168] The UNCC established rules for the proper presentation of claims by nationality and, for most individuals, the country representing their claims was also the state of their nationality.[169] Countries were also responsible for distributing awards.[170]

Uniquely relevant to the SIDS' circumstances, the UNCC also provided procedures for claims brought by stateless citizens.[171] The phenomenon of "drowning" island nations and deterritorialized states has recently been the topic of substantial scholarly inquiry.[172] It is possible that in a few decades claims will come from citizens of low-lying atoll nations, who have been entirely deterritorialized, seeking compensation for their displacement. For the UNCC, an "exceedingly tricky problem" was determining which government would espouse the claims of Palestinians forced to depart Iraq or Kuwait, many of whom were stateless or lacking appropriate travel documents.[173] The Governing Council of the UNCC ultimately decided that the UNCC itself and relevant UN agencies, such as the High Commissioner for Refugees, would assume the functions of collecting and

167. *See* Bederman, *supra* note 91, at 30.
168. *Id*. For more in depth discussion of process, see generally *id*. Countries could also submit claims for other persons resident in their country, including permanent residents, refugees, and asylum-seekers. *See* Van Houtte et al., *supra* note 106, at 333.
169. *See* Bederman, *supra* note 91, at 30.
170. *See* Van Houtte et al., *supra* note 106, at 365 (describing commission rules regarding distribution of awards and the meticulous reporting requirements detailing country arrangements and progress).
171. *See* Bederman, *supra* note 91, at 30; *See also* Van Houtte et al., *supra* note 106, at 333. For further discussion of the phenomenon of climate-induced migration, see generally Maxine Burkett, *The Nation Ex-Situ: On Climate Change, Deterritorialized Nationhood, and the Post-Climate Era*, 2 CLIMATE L.J. 345 (2011).
172. *See generally* Maxine A. Burkett, *The Nation Ex-Situ*, *in* THREATENED ISLAND NATIONS: LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE 89 (Michael B. Gerrard & Gregory Wannier eds., 2013).
173. *See* Bederman *supra* note 91, at 30.

presenting claims.[174]

Related to the predicament of stateless UNCC claimants, it is possible that countries beyond the SIDS can pursue viable claims for hosting the climate displaced. The issue of who will absorb these costs has emerged without sufficient resolution.[175] The CRC might provide one avenue for subsidizing migration for islanders. The UNCC provides precedent for this kind of payout as well, as several awards went to governments "*outside* the region, who had come to the assistance of victim countries . . . by accommodating refugees."[176] There may be other scenarios in which third parties, not squarely contemplated here, could seek compensation for absorbing costs related to the loss and damage AOSIS member countries experience.[177]

In sum, citizens and governments of AOSIS countries are eligible to bring claims. Governments will represent the claims of their nationals as well as claims regarding environmental damage brought on the government's own behalf.

The Global Pool. AOSIS envisages a mechanism supported by an international solidarity fund to compensate for economic and noneconomic losses.[178] The sums required to fund operation of the CRC, as well as adequate compensation over time, will be substantial. One cannot overstate this. As UNCC scholars have warned, capital for this kind of facility will likely fail to meet the scope of the Commission and the scale of loss and damage it seeks to blunt.[179] Nonetheless, decisions made regarding relative contribution to the fund can set the stage for a viable and solvent fund.

The most common recommendations for relative contributions to the pool have been based on a country's contribution to global emissions and its ability to pay.[180] Introducing a slight variant, some have suggested using historical emissions to determine relative contributions for initial capitalization of the pool, followed by

174. *Id.* at 31. This was considered "a truly novel procedure;" however, as Bederman explains, "it probably is, although it may have its origins in the practice of earlier claims tribunals in which countries were permitted to espouse the claims of non-nationals to whom they had extended their protection." *Id.*

175. *See generally* Sand, *supra* note 96, at 430.

176. *Id.* at 431 (emphasis in original).

177. *See, e.g.*, Report of the Working Group of Experts, *supra* note 152, at 122 (explaining that the "[g]eneral view was that the possibility of claims by states in relation to damaged areas beyond national jurisdiction should not be excluded, provided that a clear legal interests could be demonstrated").

178. Talakai, *supra* note 3; AOSIS Insurance, *supra* note 146.

179. *See* Caron, *supra* note 87, at 274 ("There often are no funds for compensation after a catastrophe. When there are funds, they almost always will be smaller than that required to satisfy all that is likely to be awarded for the consequences of the disaster.").

180. *See generally* SBI Views & Information, *supra* note 40; AOSIS Proposal, supra note 48 (describing the funding scheme for the "Convention Adaptation Fund," on which the funding for the Multi-Window Mechanism is based).

ongoing maintenance payments based on current emissions. Both recommendations may run into resistance by the largest emitters. Contributions based on greenhouse gas emissions suggest a link between payment level and responsibility for anthropogenic climate change.[181] Although that is the basis for contribution to adaptation efforts and other features of the UNFCCC,[182] "donor fatigue" on the part of contributing nations may dampen prospects for the CRC. Industrialized nations that have great funding requirements, consistent with principles of common but differentiated responsibility, may display greater hesitation. There is some indication that this fatigue is crippling the early capitalization of the Green Climate Fund.[183] The fact that all nations would have to contribute—not just Annex I countries—might, however, ease the discussion of emissions-based contribution. All countries would provide funds based on their current emissions rates, which today will include sizeable contributions from developing states.[184] Indeed, the rate of current emissions suggests that larger developing country contributions in the future are quite conceivable.[185]

There are, of course, myriad ways in which the CRC could secure funding, at least initially.[186] Other suggestions include linking compensation to a country's failure to mitigate[187] or by introducing a "tax on the use of the commons,"[188] in this case the atmospheric commons. Island nations also contemplate additional contributions from bilateral and multilateral sources and other actors, such as private donors, intergovernmental organizations, and nongovernmental organizations.[189]

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181. It is important to note here that least develop countries and SIDS contribute just over 1% of global emissions, combined. *See* Techera, *supra* note 6, at 348.
182. *See generally* UNFCCC, *supra* note 2, at art. 3.
183. *See* AOSIS Expert Meeting, *supra* note 59.
184. Tol and Verheyen explain, "If one counts all emissions from the time governments could have known about climate change, OECD responsibility is large. If one starts counting at the time climate change was officially recognised as a policy problem, OECD responsibility is much smaller." Tol & Verheyen, *supra* note 54, at 1127.
185. Tol and Verheyen go even further, stating:

> Developing countries may be held responsible for their future emissions, which cannot be excused by a lack of knowledge about the consequences or a lack of technological alternatives. Scenarios under which the responsibilities of developing countries exceed those of developed countries, and the net compensation flows are from South to North are not inconceivable.

Id. Based on current emissions and likely future capacity, this should not be a concern for developing countries like the SIDS and least developed countries.
186. *See*, *e.g.*, Millar et al., *supra* note 11, at 444-45 (discussing funding for an international insurance pool).
187. And, of course, the more aggressive the mitigation, the lower the contributions to the global pool.
188. AOSIS Expert Meeting, *supra* note 59.
189. AOSIS Proposal, *supra* note 48. For other novel funding sources, see Rosemary Lyster, *A Fossil Fuel-Funded Climate Disaster Response Fund under the UNFCCC Loss and Damage Mechanism* (Univ. of Sydney Law Sch., Legal Studies Research Paper No. 13/77, 2013); Randall S. Abate,

The forms of compensation may also vary and have been diverse in other claims resolution facilities.[190] Monetary compensation is the norm, but in-kind payments are also plausible. This might include property repair, outreach assistance, and perhaps unique to the SIDS circumstances, host country support of climate-induced migrants.

In sum, all UNFCCC parties will pay into a global pool from which countries will receive a payout or in-kind compensation based on their losses.

Triggering Events. Compensation is appropriate at two primary points—now and at the time of a triggering event. There are some payments that could occur immediately upon the institution of the CRC. Funding for establishing and recording environmental baselines and introducing reasonable monitoring of slow-onset events will be important for SIDS, who for the most part suffer from a dearth of relevant data and research capacity.[191] Recorded baselines would be key to determining triggers for compensation.[192] Governments would pursue these funds.

Perhaps the more challenging technical questions for the CRC will be to determine when a slow-onset event has caused damage sufficient to trigger the payment of claims. For this determination, it would be best to borrow parametric approaches widely used in the insurance industry and suggested by AOSIS in their insurance proposal. In other words, an individual or country's claims would ripen once the impact of an event exceeds an agreed on level beyond the recorded baseline for that country.[193] As AOSIS identifies in its proposal for rehabilitation and compensation payments in a Multi-Window Mechanism, parameters could include air temperature, precipitation events, wind speed, and soil salinity in addition to ocean acidity and sea-level rise.[194]

As these are primarily scientific questions, the CRC's technical arm will be critical for assessing where impacts exist and when payments are appropriate. A preliminary consideration of plausible triggering events might also include the

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Corporate Responsibility and Climate Justice: A Proposal for a Polluter-Financed Relocation Fund for Federally Recognized Tribes Imperiled by Climate Change, 25 FORDHAM ENVTL. L. REV. 10 (2013).

190. *See* McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1373.

191. *See* IPCC, *supra* note 23, at 8 (stating that this would be critical, particularly in light of the dearth of data on "disasters and disaster risk reduction . . . at the local level, which can constrain improvements in local vulnerability reduction"); *see also* Alliance of Small Island States, *Informal Dialogue on Loss and Damage*, Nov. 7–8, 2012 at 4-6 [hereinafter AOSIS Dialogue Nov. 2012]. There are "significant institutional, financial and technical gaps in countries' ability to assess Loss and Damage. These included gaps in tools, data and the capacity to use the tools and conduct assessments." *Id.*

192. *See* Millar et al., *supra* note 11, at 461.

193. AOSIS suggest that "[f]or payouts using parametric approaches, different metrics might be applied in different countries." AOSIS Insurance, *supra* note 146, at 8.

194. AOSIS Proposal, *supra* note 48, at 7.

following: unremitting storm surge, inundation, and infrastructure damage above an agreed on sea-level baseline; significant regional reef ecosystem collapse or the extinction of a particular marine species;[195] and migration of the majority of country residents beyond the baseline.

The valuation of damages will be exceedingly difficult. Creating a standing work group committed to providing appropriate definitions and methodologies for valuing harm from economic and noneconomic loss and damage over time will be an indispensible, early task for the CRC. This group may be housed under the technical arm of the CRC.

In sum, the need for financial assistance to establish and record baselines is immediate. To the extent it is not completed sufficiently under a disaster risk component, claims based on setting baselines and monitoring and prevention will ripen at the founding of the CRC. Parametric indicators will govern the ripening of claims due to slow-onset events.

B. The Structure of the Compensation and Rehabilitation Commission

The structure of the CRC would be consistent with AOSIS's proposal for a multi-window mechanism for loss and damage, situated under the Framework Convention and housed within the UNFCCC Secretariat.[196] The mechanism board would provide oversight, and institutional arrangements would include technical, financial, and administrative functions, the latter provided by the UNFCCC Secretariat. The Technical Advisory Facility and a Financial Vehicle would support the three mechanism components, including the rehabilitation and compensation component. Specifically, the Technical Advisory Facility would, among other things, assist countries in establishing locally-relevant baseline parameters and verify when an event exceeded parameters. It would operate with input from the insurance sectors and the disaster risk reduction community, as well as other UN organs. The Financial Vehicle would manage Mechanism funds, including accumulating funds as well as paying out on claims made when

195. For payments triggered by species loss, see Report of the Working Group of Experts, *supra* note 152, at 130. The Working Group explained,

> [O]ne could establish in lieu of case-by-case assessment of restoration and damage costs, a schedule of damages based, for example, on the loss of a particular bird–taking into account, its rarity among other things–such as schedule might be based on average restoration and damage costs. This practice is adopted in a number of national jurisdictions.

Id.

196. *See generally* AOSIS Proposal, *supra* note 48, at 4.

parametric thresholds are exceeded.[197]

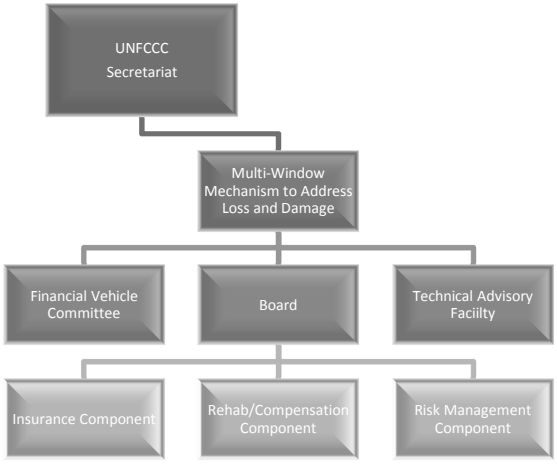

Figure 2. AOSIS's proposed structure for a Multi-Window Mechanism to Address Loss and Damage from Climate Change Impacts.

1. CRC Administration

As is typical of other large claims resolution facilities,[198] the CRC should have a governing entity of trustee-like appointees, claims administrators, financial and statistical consultants, and a sizeable staff, perhaps numbering in the hundreds.[199] A Governing Council and Panels of Commissioners would constitute the two main entities of the CRC, with the UNFCCC Secretariat providing critical administrative support to the Council and Commissioners.[200]

197. The Financial Vehicle/Facility would be created inside the UNFCC, but could be housed at an external financial institution. *Id.*
198. *See* McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1369.
199. *See* McGovern, *Dispute System Design: The United Nations Compensation Commission*, *supra* note 92, at 172 (explaining that eventually the UNCC Secretariat staff grew to over 300 employees).
200. This parallels the UNCC's governance structure. *See* Caron & Morris, *supra* note 101, at 186; s*ee also* Van Houtte et al., *supra* note 106.

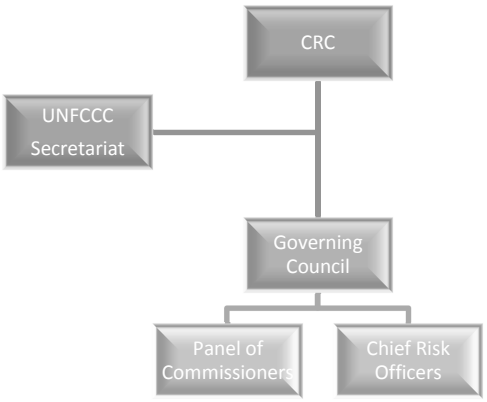

Figure 3. The proposed structure of the Small Islands Climate Compensation and Rehabilitation Commission.

The Governing Council would be responsible for setting policy regarding the CRC fund and the procedures applicable to claims resolution. It would "prescrib[e] a jurisprudence to be applied to classes of cases"[201] through administrative decisions regarding the definition of terms,[202] evidentiary and causation requirements, the quantum of damages, and the principles for handling issues such as late-filed claims, among other things.[203] Representatives of parties to the UNFCCC would serve on the Council. The Governing Council may also opt to use fixed compensation for some claims, particularly for those that are relatively small. For the UNCC, this approach would be advantageous for a number of reasons, including: the ability to establish modified evidentiary standards; the ability to ensure equality among successful claimants within the same claims categories; and increased efficiency due to the reduced length of argument regarding the precise extent of individual damages.[204]

The Council may also designate certain claims categories for expedited treatment, both in the processing and payment stages. Generally speaking, the Governing Council might require a statement from the claimant through his or her government and any additional relevant documentary evidence.[205] The Council could relax evidentiary standards for small individual claims, reserving more

201. Bederman, *supra* note 91, at 19.
202. This would be done with the assistance of relevant working groups under the technical facility.
203. *See* Bederman, *supra* note 91, at 20.
204. *See* Van Houtte et al., *supra* note 106, at 365.
205. This is typical for establishing eligibility, with the possibility for "surrogate criteria" when eligibility criteria are difficult to meet. *See* McGovern, *The What and Why of Claims Resolution Facilities*, *supra* note 86, at 1370-71.

demanding standards for large claims. Commentators have found this to be a fair, appropriate, and "humanitarian" approach for individual claimants seeking small, fixed sums for compensation and for whom documenting claims might be difficult.[206]

The Panels of Commissioners would apply procedures adopted by the Council to the submitted claims.[207] Commissioners would serve on panels and review and evaluate claims presented. The panels would determine the admissibility, relevance, materiality, and weight of any submitted documents.[208] Further, the commissioners could require certain elements for claims review, including: evidence of injury; evidence of the conduct that caused the injury; evidence of a direct relationship between the conduct and the injury; and elements of damages sought.[209] Consistent with the inquisitorial model, the Commissioners would primarily fulfill the fact-finding function of the CRC. Like the UNCC, the Commissioners should represent a diverse cross-section of the member countries acting in their individual capacities rather than as proxies for their national authorities.[210]

The Technical Advisory Facility, outlined in the AOSIS proposal would be particularly important to the CRC. This facility would need dedicated staff for the CRC, with deep expertise in relevant fields, from climate science to statistical modeling. It should also house working groups that provide rigorous economic analysis for questions involving claim valuation.[211]

Another element of the AOSIS proposal that is relevant here is the inclusion of a Chief Risk Officer.[212] With slight modification, the CRC would engage the Chief Risk Officer as an agent of the UNFCCC residing in country. The Chief Risk Officers would work independent of national authorities and would facilitate the CRC on the ground, from the commissioning of risk assessments to deciphering

206. *See* Van Houtte et al., *supra* note 106, at 347.
207. *See generally* McGovern, *Dispute System Design: The United Nations Compensation Commission*, *supra* note 92, at 180-81.
208. *See* Bederman, *supra* note 91, at 23 (citing UNCC Rules of Claims Procedure). AOSIS envisages the Financial Vehicle serving this purpose. *See* AOSIS Proposal, *supra* note 48, at 7. Consistent with the mission of the CRC, I believe the Panel of Commissioners would be a more appropriate entity to review claims under the inquisitorial model of claims resolution.
209. This is adapted from the UNCC Working Group's expectations regarding the environmental panel's review. *See* Report of the Working Group of Experts, *supra* note 152, at 126. The Governing Council can also simplify the evaluation of directness of loss for the commissioners by identifying a set number of factors that if present in a particular claim would establish the required causal link. *See* Van Houtte et al., *supra* note 106, at 334. This could be especially help for SIDS under the circumstances.
210. *See* Van Houtte et al., *supra* note 106, at 332.
211. *See* AOSIS Proposal, *supra* note 48, at 4.
212. *See* AOSIS Insurance, *supra* note 146, at 6. My proposal expands the list of responsibilities for the Chief Risk Officer.

risks requiring community and infrastructure relocation, to ensuring legitimate use of compensation awards by governments through auditing procedures.

In closing, it is crucial not to understate the importance of efficient administration of the CRC. The division of the Secretariat that assists the Commission will have a crucial role in claims processing. Indeed for the UNCC, its Secretariat was the "driving force behind the design and development of efficient and fair mass claims processing techniques,"[213] including the development and maintenance of a computerized claims database.[214] It was the "workhorse for generating the substantive ideas, methodologies, and criteria for evaluating, processing and compensating claims."[215] A well-resourced Secretariat from diverse backgrounds[216] would guarantee the effectiveness and perceived legitimacy of the entire commission.

2. Plausible Claims Categories

AOSIS envisions claims made for economic loss, such as lost revenue to the tourism or fishing industries, property loss and damage, cultural impacts, environmental damage and the cost of relocation in the event of loss of habitable territory.[217] For ease of administration, however, it will be necessary to identify broader categories under which the CRC can make payments. In practice, the Governing Council would divide the claims into coherent categories for processing and disposition. The categories might include the following:

- Category A would consist of individual claims for property damage and personal injury due to a triggering climate event. The Governing Council would likely apply a fixed sum to similar claims.
- Category B would consist of individual claims for economic loss due to a triggering climate event. The Governing Council would likely apply a fixed sum to similar claims.
- Category C would compensate climate-induced migrants, forced to leave their country of residence due to a triggering climate event. Claimants would be eligible for fixed compensation for their dislocation, based on factors determined by the Governing Council. Other possible

213. Van Houtte et al., *supra* note 106, at 331.
214. *Id*. at 330.
215. *Id*. at 331.
216. *See* Van Houtte et al., *supra* note 106, at 331 ("Cultural differences, including different legal and conceptual approaches to fairness and efficiency in context claims resolution, have led to a balanced and flexible approach to problems.").
217. Talakai, *supra* note 3; *see* AOSIS Proposal, *supra* note 48, at 7.

claimants might include countries that host substantial numbers of displaced islanders.

- Category D claims would compensate individuals making claims for a variety of damages up to $100,000. Claims might include migration, personal injury, and property loss and damage.
- Category E claims would compensate individuals seeking more than $100,000 in compensation. Elements of this claim would be identical to Category D, but because of the larger requested sum, claimants would need to adhere to more stringent procedures and higher evidentiary standards, such as a more detailed documentation of losses.
- Category F claims would consist of government claims for their losses, including: loss of government property, evacuation costs, and damage to environmental and natural resources, including, for example, loss of value of or access to exclusive economic zones.[218]

Categories A through C might benefit from expedited review, particularly for those with fixed compensation or sums totaling less than, say, $100,000, similar to the UNCC. Further, like the UNCC, the CRC can decide to resolve certain claims first, depending on the "humanitarian urgency" that certain claims might introduce.[219] Individuals that suffer the loss of their livelihoods, or loss of their already limited possessions, or can no longer inhabit ancestral homes would rightly enjoy "privileged treatment" at the CRC, given the dire circumstances.[220]

Conclusion

Critics from varied perspectives might declare the Small Island Compensation and Rehabilitation Commission unviable. The hurdles are enormous. Political will may be absent for the foreseeable future. General skepticism about the efficacy of UNFCCC institutions abounds, with funding and management challenges already dogging existing efforts. The cost and scale of the CRC, based on the framework sketched here, may seem prohibitive. Notwithstanding these potential deficiencies, however, AOSIS has good reason to press its proposal. For SIDS, this approach in concept and execution is necessarily suboptimal—all, I assume, would prefer that climate change did not so fundamentally compromise their futures. The CRC, however, may be a welcome alternative to the more formidable obstacles present in pursuing international litigation for climate-related loss and damage or

218. The Pacific islands, for example, cover a large ocean expanse with EEZs totaling more than 27,000,000 km^2. Techera, *supra* note 6, at 339.
219. Caron & Morris, *supra* note 101, at 187.
220. Van Houtte et al., *supra* note 106, at 341.

tackling unabated climate change without some assistance. Further, the benefits to the global community are clear and copious when compared to the costs of delayed attempts to anticipate and manage slow-onset climatic processes.

Of course, comparisons between the costs and benefits of action, on the one hand, and far costlier inaction, on the other, have not persuaded the largest emitters to act with prevention and precaution in mind. There are a few significant exceptions noted above. These countries provide hope that the AOSIS proposal and elaboration of component parts will have traction in the near term. If not, it seems clear that the proposal will serve as evidence of yet another missed opportunity to avoid worst-case scenarios.