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**ADDRESSING LOSS AND DAMAGE CAUSED DUE TO  
CLIMATE CHANGE: CLIMATE FINANCE AND THE  
LAW OF STATE RESPONSIBILITY**

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***Abstract***

As the effects of climate change worsen, loss and damage is an unavoidable reality. A defining feature of the climate crisis is the unequal distribution of its causes and effects. Loss and damage will be most devastating in countries that have contributed the least to climate change, due to a combination of geographic and economic vulnerability. In response to this inequity, loss and damage has become a recent focus of international climate negotiations and has come to be regarded as the ‘third pillar’ of international climate change law, alongside mitigation and adaptation. Despite this newfound focus, however, vulnerable countries are becoming impatient at the lack of progress in establishing a mechanism to address loss and damage. This paper conducts an overview of loss and damage in the international climate regime and considers two alternate routes for how it could be addressed. Firstly, by way of the law of state responsibility, under which injured states may be able to see reparation for loss and damage from states that have states that have contributed heavily to climate change. Secondly, by way of climate finance mechanisms such as insurance, debt cancellation, and multilateral funds. After considering the strengths and weaknesses of each approach, this paper concludes that a multilateral fund presents the best opportunity to address loss and damage. Ultimately, however, a comprehensive approach to address loss and damage will likely require a combination of approaches accompanying a multilateral fund.

***Keywords:*** climate change, loss and damage, state responsibility, climate finance

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## *I Introduction*

As the state of climate change worsens, unavoidable loss and damage is becoming of increasing concern. The IPCC has predicted with high confidence that human-induced climate change is driving an increase in the frequency, intensity, and duration of extreme weather events, causing widespread and severe loss and damage to human and natural systems.<sup>1</sup> In 2022 alone, the United Kingdom reached its highest temperature on record,<sup>2</sup> Pakistan experienced unprecedented flooding,<sup>3</sup> and China had its longest drought in recorded history.<sup>4</sup> The cost of climate related damages is estimated to reach US\$150 billion per year by 2025.<sup>5</sup> While the effects of climate change will be felt globally, they will be most devastating in the least developed countries.<sup>6</sup> This is due to geographic and economic vulnerability, meaning not only will the actual impacts be more devastating, but the ability to respond to these impacts is restricted.<sup>7</sup> Therefore, the heaviest burdens of loss and damage will be felt by the states that have contributed the least to climate change.<sup>8</sup> This raises issues of equity, responsibility, and the possibility of reparation. Given this context, loss and damage has become a focal point of climate negotiations, and considered by many as a ‘third pillar’ of the climate regime, alongside mitigation and adaptation.<sup>9</sup>

Part II of this paper will give an overview of the loss and damage principle and its evolution in the international climate regime. Part III will explore the potential for injured states to seek reparation for loss and damage caused due to climate change through the international law of state responsibility. Part IV will discuss the possibility of climate finance mechanisms as an alternative tool for addressing loss and damage. This paper determines that climate finance

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<sup>1</sup> Intergovernmental Panel on Climate Change *Climate Change 2022: Impacts, Adaptation and Vulnerability Technical Summary* (2022) at 47.

<sup>2</sup> Met Office “A milestone in UK climate history” (22 July 2022) <[www.metoffice.gov.uk](http://www.metoffice.gov.uk)>.

<sup>3</sup> Abid Hussain “Are catastrophic floods Pakistan’s new normal?” (1 September 2022) Aljazeera <[www.aljazeera.com](http://www.aljazeera.com)>.

<sup>4</sup> Keith Bradsher and Joy Dong “China’s record drought is drying rivers and feeding its coal habit” (26 August 2022) New York Times <[www.nytimes.com](http://www.nytimes.com)>.

<sup>5</sup> KPMG *COP25: Key outcomes of the 25<sup>th</sup> UN climate conference* (December 2019).

<sup>6</sup> Intergovernmental Panel on Climate Change *Climate Change 2022: Impacts, Adaptation and Vulnerability* (2022) at 11.

<sup>7</sup> At 11.

<sup>8</sup> See Our World in Data “CO<sub>2</sub> emissions per capita vs GDP per capita, 2018” <<https://ourworldindata.org/grapher/co2-emissions-vs-gdp?time=latest>>. Illustrates the correlation between economic development and contribution to greenhouse gas emissions.

<sup>9</sup> Edward A Page and Clare Heyward “Compensating for Climate Change Loss and Damage” (2016) 65 *Political Studies* 356 at 357.

provides a more flexible alternative which overcomes many of the barriers of international law. However, it also acknowledges the importance of rooting a scheme to address loss and damage in principles of state responsibility in order to achieve a sense of climate justice. Therefore, this paper concludes that a multilateral fund whereby contributions are determined by states' relative degree of responsibility, presents the best opportunity to adequately address loss and damage.

## *II Loss and Damage*

Loss and damage, as a concept in international law, emerged in the early 1990's as a response to the inadequacy of adaptation and mitigation.<sup>10</sup> In particular, it was intended to support vulnerable communities who bear a disproportionate burden of the effects of climate change,<sup>11</sup> and can be seen as a formal recognition from the international community of this fact.<sup>12</sup> Loss and damage has gradually increased in importance since, reaching a point of culmination at COP26. This section establishes a working definition of loss and damage, provide justifications for its place in international law, and traces its origins and evolution in the climate regime.

### *A Defining Loss and Damage*

No formal definition for loss and damage is provided in a United Nations Framework Convention on Climate Change (UNFCCC) document. However, it has been defined by the Subsidiary Body for Implementation (SBI) in a literature review on loss and damage as “the actual and /or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems”.<sup>13</sup> The most commonly accepted definitions in literature refer to the residual impacts of climate change resulting from sudden and slow onset events, which mitigation and adaptation are insufficient to prevent or alleviate.<sup>14</sup> ‘Loss’ tends to describe impacts which are irreparable, whereas ‘damage’ describes

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<sup>10</sup> Krishnee Appadoo “A short history of the loss and damage principle” (2021) RJOI 315, at 315.

<sup>11</sup> At 318.

<sup>12</sup> MJ Mace and Roda Verheyen “Loss, damage and responsibility after COP 21: All options open for the Paris Agreement” (2016) 25 *Reciel* 197 at 198.

<sup>13</sup> *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 XXXVII*, FCCC/SBI/2012/INF.14 (15 November 2012) at 3.

<sup>14</sup> Appadoo, above n 10, at 315; Yvonne Karimi-Schmidty *The issues of loss and damage within the international climate law* (University of Graz, Working paper No 06-2020, 2020) at 2; and Alice Venn

an impact which can be rectified.<sup>15</sup> It is also generally accepted that loss and damage includes economic and non-economic harms.<sup>16</sup>

Defining loss and damage as the ‘residual’ impacts of climate change is potentially problematic. It is not clear whether this is limited to impacts which result despite adaptation and mitigation efforts, or if it includes impacts which could have been avoided if it were not for a failure to implement sufficient adaptation and mitigation efforts. The former can be referred to as unavoidable impacts, and the latter as unavoided impacts.<sup>17</sup> Some authors have concluded that this divergence in views, and lack of accepted definition, makes loss and damage an inadequate concept to deal with reparation of the impacts of climate change.<sup>18</sup> However, I would argue that the more logical conclusion is to accept the wider definition that includes both unavoidable and unavoided impacts. There are two main reasons to support this view. Firstly, article 31(1) of the Vienna Convention states that treaties are to be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in light of its object and purpose.<sup>19</sup> Given the aim of loss and damage is to compensate states who have suffered harm due to climate change, it would be illogical to prevent recovery for resulting harms on the basis that they could have been avoided, albeit they were not. Secondly, if a narrow definition is preferred and recovery for unavoided impacts is prevented, it removes the incentive for states to implement adequate mitigation and adaptation efforts in an attempt to avoid responsibility for loss and damage.

## *B Justifications*

The principle of loss and damage in international law is important because it recognises the unequal distribution of the causes and effects of climate change, and the fact that climate

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“Legal Claims for reparation of Loss and Damage” in B Mayer and A Zahar (eds) *Debating Climate Change* (Cambridge University Press, 2021) 329, at 330 and 331.

<sup>15</sup> Thomas Schinki, Reinhard Mechler and Stefan Hochrainer-Stigler “The Risk and Policy Space for Loss and Damage: Integrating Notions of Distributive Justice and Compensatory Justice with Comprehensive Climate Risk Management” in R Mechler, L M Bouwer, T Shinko, S Surminski and J Linnerooth-Bayer (eds) *Loss and Damage from Climate Change: Concepts, Methods, and Policies* (Springer, Cham, 2019) 83 at 86.

<sup>16</sup> Venn, above n 14, at 331.

<sup>17</sup> Noémie Rachel Kugler and Pilar Moraga Sariago “Climate change damages, conceptualization of a legal notion with regard to reparation under international law” (2016) 13 *Climate Risk Management* 103.

<sup>18</sup> At 107.

<sup>19</sup> Vienna Convention on the Law of Treaties 1155 UNTS 331 (signed 23 May 1969, entered into force 27 January 1980), art 31(1).

change is projected to lead to unavoidable and potentially irrevocable loss and damage.<sup>20</sup> Justification for the inclusion of loss and damage as a principle in international climate change law, can be found in concepts of climate justice and a human rights based approach (HRBA) to climate change.

### *I Climate Justice*

Adelman puts forward three interlinked principles of climate justice which justify the assigning of duties to high emitting developed states to address loss and damage in low emitting developing states.<sup>21</sup> These are historical responsibility, beneficiary pays, and ability to pay.<sup>22</sup>

The principle of historical responsibility recognises that countries who have had historically high greenhouse gas (GHG) emissions, have a duty to assist those with historically lower emissions profiles to deal with the consequences of climate change.<sup>23</sup> This is also consistent with the concept of compensatory justice and the polluter pays principle, whereby the costs of climate change are expected to fall on those with the greatest responsibility for contributing to climate change.<sup>24</sup> However, basing responsibility off of historical emissions raises an ethical issue. It is arguably unfair to impose obligations on states whose emissions peaked at a time where the consequences of those emission were not yet fully understood.<sup>25</sup> Furthermore, some of the early high emitters have subsequently reduced their emissions. The United Kingdom, for example, was responsible for 77 per cent of global CO<sub>2</sub> emissions in 1850, and just 4 per cent in 2020.<sup>26</sup> However, the beneficiary pays and ability to pay principles provide support for historic responsibility, despite this ethical concern.

The beneficiary pays principle recognises that states which underwent carbon based industrialisation have the reaped long-term benefits of their emissions, including sustained economic growth, advanced infrastructure and technology, higher standards of living, and a

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<sup>20</sup> Above n 1.

<sup>21</sup> Sam Adelman “Climate justice, loss and damage and compensation for small island developing states” (2016) 7 JHRE 32.

<sup>22</sup> At 36.

<sup>23</sup> At 36.

<sup>24</sup> Schinki, Mechler and Hochrainer-Stigler, above n 15, at 90; and Ashmita Barthakur “Polluter pays principle as the key element to environmental law” (2021) 11 IJSRP 274.

<sup>25</sup> Adleman, above n 21, at 37.

<sup>26</sup> Hannah Ritchie and Max Roser “United Kingdom: CO<sub>2</sub> country profile” Our World Data <<https://ourworldindata.org/co2/country/united-kingdom>>.

stronger capacity to adapt to climate change.<sup>27</sup> It is on this basis that such states have a moral obligation to provide resources to less developed states to address loss and damage.<sup>28</sup>

The ability to pay principle argues that the economic benefits obtained from carbon based industrialisation mean that states with historically high emissions also have the greatest capacity to respond climate change.<sup>29</sup> Moss argues that ability to afford the costs of climate change is the main factor which generates a duty to compensate loss and damage.<sup>30</sup> This proposition is also supported by the principles of common but differentiated responsibilities (CBDR) and distributive justice. These principles recognise that not all states have contributed equally to climate change, and that the risks of loss and damage should be shared in a way that reflects the capability of agents to manage these risks.<sup>31</sup>

## II *Human Rights Based Approach*

Loss and damage and human rights are inextricably linked. Toussaint and Blanco argue that the inadequacy of the UNFCCC regime to protect against loss and damage is due to its insufficient recognition of human rights.<sup>32</sup> The only references to human rights are in the preamble of the UNFCCC,<sup>33</sup> and the preamble of the Paris Agreement.<sup>34</sup> Integrating a HRBA into the climate regime gives those most affected by loss and damage a greater voice in the climate policy process, and recognises that climate policy does not exist in a vacuum.<sup>35</sup> Loss and damage due to climate change poses a severe threat to the human rights of those in affected communities, including impacts on civil, political, economic, social, cultural, and collective

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<sup>27</sup> Adleman, above n 21, at 37.

<sup>28</sup> At 37.

<sup>29</sup> At 37.

<sup>30</sup> Jeremy Moss “Climate Justice” Jeremy Moss (ed) *Climate Justice and Social Change* (Melbourne University Press, Carlton, 2009) 51 at 58.

<sup>31</sup> Schinki, Mechler and Hochrainer-Stigler, above n 15, at 90.

<sup>32</sup> Toussaint and Blanco, above n 36, at 743.

<sup>33</sup> United Nations Framework Convention on Climate Change 1771 UNTS 107 (opened for signature 9 May 1992, entered into force 21 March 1994) at 2. “The parties to this convention [acknowledge] that change in the Earth’s climate and its adverse effects are a common concern of humankind”.

<sup>34</sup> Paris Agreement Under the United Nations Framework Convention on Climate Change 3156 UNTS (opened for signature 16 February 2016, entered into force 4 November 2016) at 2. “Acknowledging that climate change is a common concern of humankind, parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity”

<sup>35</sup> Patrick Toussaint and Adrian Martinez Blanco “A human rights-based approach to loss and damage under the climate change regime” (2020) 20 *Climate Policy* 743 at 744.



rights.<sup>36</sup> For example, the rights to life, liberty, work, development, and self-determination.<sup>37</sup> Therefore, acknowledging the human rights implications of climate change provides justification for the inclusion of a loss and damage principle in international law.

### *C Loss and Damage in the Climate Regime*

The concept of loss and damage was first championed by the Alliance of Small Island States (AOSIS) in 1991 during negotiations in the lead up to the UNFCCC.<sup>38</sup> AOSIS proposed the creation of an international insurance pool to respond to loss and damage resulting from sea level rise in small island states.<sup>39</sup> Since its initial proposal, AOSIS has continued to be an extremely active advocate for loss and damage mechanisms in international law. Most recently, pushing for it to be an official item on the agenda at COP27.<sup>40</sup> This section traces the evolution of loss and damage in the international climate regime, from 1991 to present day.

#### *I UNFCCC*

The UNFCCC, adopted in 1992 by 185 parties, was the first multilateral treaty addressing climate change.<sup>41</sup> The objective of the convention was to stabilise GHG concentrations in the atmosphere to a level that would prevent dangerous anthropogenic interference with the climate system.<sup>42</sup> The time frame for achieving this objective was one which would allow ecosystems to adapt, food production to not be threatened and economic development to proceed.<sup>43</sup> Despite receiving significant support from developing countries during negotiations, AOSIS' proposal was not adopted, and the text of the UNFCCC makes no direct reference to loss and damage. However, some provisions may be interpreted in a way which provides an indirect means of addressing loss and damage.

Article 4.8 calls for parties to consider the necessary actions, including those related to funding and insurance, to meet the needs and concerns of developing country parties arising from the

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<sup>36</sup> At 744 and 748.

<sup>37</sup> At 744.

<sup>38</sup> *Institutional Arrangements* UN Doc A/AC.237/15 (1992) at 126.

<sup>39</sup> At 126.

<sup>40</sup> Alliance of Small Island States *Media Briefing Note: Loss and Damage Response Fund* (2021).

<sup>41</sup> UNFCCC, above n 33.

<sup>42</sup> Article 2.

<sup>43</sup> Article 2.

adverse effects of climate change.<sup>44</sup> Adverse impacts are defined as “changes in the physical environment or biota ... which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare.”<sup>45</sup> Adverse impacts is the equivalent concept within the UNFCCC to loss and damage.<sup>46</sup> Furthermore, as loss and damage is ultimately concerned with mobilising finance to address the adverse effects of climate change, article 4.8 is the closest provision to addressing the concerns raised by AOSIS. However, the actual commitments required of parties under this provision is unclear.<sup>47</sup>

## II *Kyoto Protocol*

The next iteration of multilateral climate agreements is the Kyoto Protocol, which established binding emission reduction targets for developed countries.<sup>48</sup> While the Kyoto Protocol itself did not address loss and damage, it marked the start of a period where loss and damage gained increasing traction in the international regime. Between 2005 when the Kyoto Protocol came into force, and 2016 when the Paris Agreement came into force, loss and damage was referred to in several COP decisions. Although the legally binding status of COP decisions is debated, they are commonly treated as de facto obligatory.<sup>49</sup> Therefore, they provide a useful insight into the progress and evolution of loss and damage in the climate regime.

The first official COP document to incorporate the terminology of loss and damage was the Bali Action Plan (adopted at COP13).<sup>50</sup> One of the objectives of the plan was to consider “disaster reduction strategies and means to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change”.<sup>51</sup> This reference was under the provision on enhanced action and

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44 Article 4.8.

45 Article 1.

46 Jorge G A Garcia “Challenges of compensation and reparation for loss and damage related to the adverse effects of climate change” (2020) 13 *Mex law rev* 183 at 191.

47 Karimi-Schmidty, above n 14, at 5.

48 Kyoto Protocol to the United Nations Framework Convention on Climate Change 2303 UNTS 162 (opened for signature 16 March 1998, entered into force 16 February 2005).

49 Kugler and Sariago, above n 17, at 106

50 *Bali Action Plan* Decision 1/CP.13 (14 March 2008).

51 At 2.

adaptation, illustrating that initially, loss and damage was considered as a component of adaptation as opposed to a stand-alone principle.<sup>52</sup>

The Cancun Agreements (adopted at COP16) recognised the need to strengthen international cooperation and expertise in order understand and reduce loss and damage associated with the adverse effects of climate change.<sup>53</sup> A work programme was also established to consider approaches to address loss and damage.<sup>54</sup> As with the Bali Action Plan, this reference was contained under the section enhanced action on adaptation. The agreements also stated that “owing to [their] historical responsibility”, developed countries must take the lead in mitigating the adverse effects of climate change.<sup>55</sup> Although this in the context of mitigation, this illustrates the legitimacy of historical responsibility as a principle for justifying the imposition of the burdens of climate change on developed states.

The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM) is considered a landmark milestone for the recognition of loss and damage in international law.<sup>56</sup> Established at COP19, under the Cancun Adaptation Framework,<sup>57</sup> it was the first time that loss and damage became an official issue within the international climate regime, distinct from adaptation or mitigation.<sup>58</sup> WIM was established to fulfil the role of promoting implementation of approaches to address loss and damage,<sup>59</sup> and has three main functions to give effect to this aim. Firstly, enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage.<sup>60</sup> Secondly, strengthening dialogue, coordination, coherence and synergies among relevant stakeholders.<sup>61</sup> Thirdly, enhancing action and support, including finance, technology and capacity building to address loss and damage.<sup>62</sup> An executive committee was also established to guide the

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<sup>52</sup> Morten Broberg “Interpreting the UNFCCC provisions on ‘mitigation’ and ‘adaptation’ in light of the Paris Agreements provisions on ‘loss and damage’ (2020) 20 Climate Policy 527, at 531.

<sup>53</sup> *The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention* Decision 1/CP.16 (15 March 2011) at [25].

<sup>54</sup> At [26].

<sup>55</sup> At 8.

<sup>56</sup> Appadoo, above n 10, at 320.

<sup>57</sup> *Warsaw international mechanism for loss and damage associated with climate change impacts* Decision 2/CP. 19 (31 January 2014) at [1].

<sup>58</sup> Karimi-Schmidty, above n 14, at 13.

<sup>59</sup> *Warsaw international mechanism for loss and damage associated with climate change impacts*, above n 57 at [5].

<sup>60</sup> At [5].

<sup>61</sup> At [5].

<sup>62</sup> At [5].

implementation of these functions.<sup>63</sup> The committee is accountable to COP and is required to report annually and make recommendations through the Subsidiary Bodies for Scientific and Technological Advice (SBSTA) and Implementation (SBI).<sup>64</sup>

WIM was significant in creating a platform for loss and damage to be addressed in international law. However, a major limitation was that it provides no clarification on the financing aspects of loss and damage, such as liability and compensation.<sup>65</sup> Since the establishment of WIM, the executive committee has largely focused on the first two objectives related to enhancing knowledge and coordination of stakeholders.<sup>66</sup> The third objective of enhancing action on finance has been largely side-lined.<sup>67</sup> This is telling of the fact that WIM was a result of compromise between developed and developing country interests.<sup>68</sup> The resistance of developed countries to expose themselves to potential liability is a theme that has underpinned loss and damage discussions from the outset, and became especially evident with the Paris Agreement.

#### *IV Paris Agreement*

The Paris Agreement contained the first reference to loss and damage in a treaty text. Article 8 states that parties to the agreement recognise the importance of averting, minimising and addressing loss and damage.<sup>69</sup> However, in adopting the Paris Agreement, parties explicitly agreed that article 8 does not provide a basis for liability or compensation.<sup>70</sup> This is a major limitation on the ability for this article to effectively address loss and damage. The decision to exclude liability was largely driven by the United States which was intent on avoiding any reference to compensation, as this might have threatened their willingness to ratify.<sup>71</sup> Therefore, it was in the wider interests of the Paris Agreement for developing countries to concede on this point. Although article 8 does not provide a basis for liability, it still recognises responsibility. In this sense, it is an important and symbolic provision.

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<sup>63</sup> At [2].

<sup>64</sup> At [2] and [3].

<sup>65</sup> Appadoo, above n 10, at 321.

<sup>66</sup> Stockholm Environment Institute *Designing a fair and feasible loss and damage finance mechanism* (2021) at 5.

<sup>67</sup> At 5.

<sup>68</sup> Schmidty, above n 14, at 13.

<sup>69</sup> Paris Agreement, above n 34, art 8.

<sup>70</sup> *Adoption of the Paris Agreement* Decision 1/CP.21 (29 January 2016) at [51].

<sup>71</sup> Mace and Verheyen, above n 12, at 203.

The most recent discussions on loss and damage following the Paris Agreement took place at COP26, where mobilising finance to address loss and damage was cited as a top priority.<sup>72</sup> Developing countries proposed the creation of the Glasgow Facility for Financing Loss and Damage.<sup>73</sup> However, the resulting Glasgow Climate Dialogue was essentially a diluted version of what was proposed. The dialogue agrees that discussion should take place regarding arrangements for funding of activities to avert, minimise and address loss and damage.<sup>74</sup> Yet another agreement to consider approaches to loss and damage, without actually taking any action towards implementing such approaches. This frustration is echoed by Monbiot, who stated that “at COP26, the wealthy countries cast themselves as saviours, yet their efforts are hopelessly inadequate and will prolong the justice”.<sup>75</sup>

At COP27 the focus will once again be on how wealthy nations with high GHG emissions can be required to compensate for loss and damage to developing nations that have not significantly contributed to climate change.<sup>76</sup> The remainder of this paper discusses state responsibility and climate finance as two avenues through which this aim might be achieved.

### *III Law of State Responsibility*

Responsibility is a concept which originates from the notion of being able to respond.<sup>77</sup> Therefore, high-emitting countries who are both responsible for, and able to respond to, loss and damage cause by climate change, have a moral obligation to assist states who bear the burden of such loss and damage. In a legal context, however, responsibility is triggered by the invasion of another’s legal interest.<sup>78</sup> This portion of the paper uses the law of state

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<sup>72</sup> Stockholm Environment Institute, above n 66, at 5.

<sup>73</sup> Saleemul Huq “Why COP26 failed to address loss and damage from climate change” (25 January 2022) OECD development matters <<https://oecd-development-matters.org/>>.

<sup>74</sup> *Glasgow Climate Pact* Decision 1/CMA.3 (8 March 2022).

<sup>75</sup> George Monbiot “Never mind aid, never mind loans: what poor nations are owed as reparations” (5 November 2021) *The Guardian* <<https://www.theguardian.com/international>>.

<sup>76</sup> Abhinav Chugh “Loss and Damage: why climate reparations are top of the agenda at COP27” (27 October 2022) World Economic Forum <[www.weforum.org/agenda/2022/10/cop27-why-climate-reparations-are-one-of-the-biggest-issues/](http://www.weforum.org/agenda/2022/10/cop27-why-climate-reparations-are-one-of-the-biggest-issues/)>.

<sup>77</sup> Rhonda Verheyen *Climate Change Damage and International Law: Prevention Duties and State Responsibility* (Brill Publishers, Leiden, 2005) at 227.

<sup>78</sup> At 227.

responsibility as a framework to assess the possibility that injured states may be able to seek reparation for loss and damage from higher emitting states.

The law of state responsibility governs how and when states will be held responsible for a breach of an international obligation.<sup>79</sup> It has two main functions. Firstly, to give legitimacy to the prevention rules contained in treaties or under international law.<sup>80</sup> Secondly, to provide injured states with a right to restoration or compensation for harm caused as a result of a breach of international law.<sup>81</sup> The relationship between international obligations and state responsibility can be thought of in terms of primary and secondary rules. The primary rules contain the substantive legal obligations, and the secondary rules are those which hold states accountable for a breach of the primary rule.<sup>82</sup> Therefore, it is not necessary for the primary rule to prescribe the consequences for a breach in order to establish responsibility.

State responsibility serves an important function, as a legal system that does not attach responsibility for an infringement causing damage would cease to have any normative force.<sup>83</sup> Any attempt to incorporate loss and damage into the international legal framework is in effect void without a mechanism for attaching responsibility. Similar sentiments have been expressed by the International Court of Justice (ICJ), in developing the law on state responsibility. The 1925 *Spanish Zone of Morocco case* established that all international rights involve international responsibility, because “responsibility is the necessary corollary of a right”.<sup>84</sup> In the 1928 *Chorzów Factory case*, the ICJ stated that “reparation is the indispensable complement of a failure to apply a convention and there is no necessity for this to be stated in the convention itself”.<sup>85</sup>

The ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts (ILC Draft Articles), are a general set of secondary rules applicable to all breaches of primary rules.<sup>86</sup> They are largely a codification of well accepted principles from international custom

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<sup>79</sup> James R Crawford “State responsibility” in Rüdiger Wolfrum (ed) *Max Planck Encyclopedia of Public International Law* (Oxford University Press, 2006).

<sup>80</sup> Verheyen, above n 77, at 232.

<sup>81</sup> At 232.

<sup>82</sup> At 230.

<sup>83</sup> At 227.

<sup>84</sup> *British Claims in the Spanish Zone of Morocco (Great Britain v Spain)* [1925] RIAA 615 at 641.

<sup>85</sup> At 29.

<sup>86</sup> International Law Commission *Draft Articles on Responsibility of States for Internationally Wrongful Acts* (Draft Articles, 2001).

and judicial decisions.<sup>87</sup> Therefore, despite not having direct binding force in and of themselves, the Draft Articles are a useful tool for clarifying the necessary elements of state responsibility.

Article 1 establishes that every internationally wrongful act entails the international responsibility of that state.<sup>88</sup> Responsible states are then under an obligation to cease the act, and make full reparation for the injury caused by the international wrongful act.<sup>89</sup> Article 2 sets out the two elements of an internationally wrongful act: it must be attributable to the state, and constitute a breach of an international obligation.<sup>90</sup> An internationally wrongful act can be an act or omission.<sup>91</sup> Therefore, in the context of loss and damage, injured states can frame their claim in one of two ways. Firstly, by alleging that the defendant states conduct of emitting GHG's has contributed to climate change and therefore resulted in loss and damage. Secondly, by arguing that the defendant states failure to implement adequate mitigation measures has contributed to climate change and therefore resulted in loss and damage. The appropriate framing depends on the primary rule upon which the claim for reparation is being argued.

From the ILC Draft Articles, it is possible to distil three main requirements for state responsibility: breach, attribution, and causation. This section analyses each of these elements and addresses some of the challenges in establishing state responsibility in the context of loss and damage. It also discusses the available remedies and addresses the concern that state responsibility for loss and damage will create unduly burdensome demands for compensation from developed states.

#### *A Breach*

An internationally wrongful act requires a breach of an international obligation of the state.<sup>92</sup> Article 12 defines a breach of an international obligation as an act of the state that is not in conformity with what is required of it by the obligation.<sup>93</sup> Therefore, establishing whether there

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<sup>87</sup> United Nations *Report of the International Law Commission on the work of its fifty-third session* (2001) at 31.

<sup>88</sup> International Law Commission, above n 86, art 1.

<sup>89</sup> Article 30 and 31.

<sup>90</sup> Article 2.

<sup>91</sup> At 32.

<sup>92</sup> Article 2(b).

<sup>93</sup> Article 12.

has been a breach depends on the substantive elements of the primary rule under which a claim is brought. The ILC Draft Articles do not specify any particular primary norms to which they apply, meaning that are broadly applicable to all international obligations.<sup>94</sup> States can bring a claim for loss and damage on the basis of a breach of an obligation under either a treaty or international law. This section will consider the possible basis's for a breach under each of these avenues. It also addresses specific issues which arise in the context of climate change, making the application of the law of state responsibility particularly complex. These issues include the timing of the breach, and the continuing and cumulative nature of the wrongful conduct.

### *I Obligations under treaties*

There are several articles in international treaties which could provide the basis for a breach. Firstly, article 8 of the Paris Agreement which is the only treaty text to directly reference loss and damage.<sup>95</sup> Despite the decision that article 8 does not give rise to compensation or liability, Mace and Verheyen argue that this possibility remains open under Paris.<sup>96</sup> The agreement precluding liability and compensation is contained in a COP decision, as opposed to the Paris Agreement itself.<sup>97</sup> Therefore, depending on the debated status of COP decisions, it is not necessarily a binding rule.<sup>98</sup> However, even if this argument is accepted, the commitments of parties required under article 8 are not clear. The article does no more than merely “recognise” the importance of averting, minimising, and addressing loss and damage.<sup>99</sup> Therefore it does not establish a positive obligation on states which can provide the basis for a breach giving rise to state responsibility. Furthermore, there would be significant political barriers to accepting the argument that liability under article 8 remains open, given the strong resistance of developed countries.

Alternatively, it may be possible to establish state responsibility for loss and damage indirectly by way of provisions such as article 4.2(a) of the UNFCCC and article 4.2 of the Paris Agreement. Under the former, “parties shall adopt national policies and take corresponding measures to

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<sup>94</sup> At 150.

<sup>95</sup> Paris Agreement, above n 34, art 8.1.

<sup>96</sup> Above n 12.

<sup>97</sup> At 205.

<sup>98</sup> At 205.

<sup>99</sup> Paris Agreement, above n 34, art 8.1.



mitigate climate change”.<sup>100</sup> Under the latter, “each party shall prepare, communicate and maintain successive nationally determined contributions ... [and] pursue domestic mitigation measures.”<sup>101</sup> The wording of “shall” means that these provisions create positive obligations on states, and a failure to fulfil these obligations will result in the triggering of state responsibility. Although neither article directly addresses loss and damage it may be possible to argue that a state’s failure to adopt national policies, prepare NDCs, or pursue mitigation measures, has contributed to climate change and therefore resulted in loss and damage. This is consistent with the wider definition of loss and damage which includes unavowed losses.

However, there are several barriers to establishing a breach by way of these articles. Under article 4.2(a) of the UNFCCC, it will be difficult to establish a breach given that most countries have adopted national policies,<sup>102</sup> and the convention provides no metric for judging their sufficiency.<sup>103</sup> Similarly, under article 4 of the Paris Agreement, the only yardstick to measure the adequacy of NDCs is ‘ambition’ which is an inherently ambiguous criterion.<sup>104</sup> In terms of mitigation, both articles require parties to merely “pursue” mitigation measures.<sup>105</sup> It is possible to pursue an aim without achieving it, making it difficult to establish when a breach of either provision has occurred. Finally, establishing a breach by way of provisions which are only indirectly related to loss and damage poses the potential for unintended consequences. If treaties which were not initially intended to give rise to an obligation in regard to loss and damage, are subsequently construed as doing so, parties may withdraw.<sup>106</sup> Furthermore, it may have the counterproductive effect of preventing parties from ratifying future agreements due to the fear that they will be subsequently construed as giving rise to liability.<sup>107</sup>

## *II Obligations international law*

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<sup>100</sup> UNFCCC, above n 33, at art 4.2(a).

<sup>101</sup> Paris Agreement, above n 34, art 4.2.

<sup>102</sup> See The London School for Economics and Political Science and Grantham Research Institute on Climate Change and the Environment “Climate Change laws of the world.- laws and policies” <<https://climate-laws.org/>>.

<sup>103</sup> Daniel H Cole “The problem of shared irresponsibility in international climate law” in A Nollkaemper and D Jacobs (eds) *Distribution of Responsibilities in International Law* (Cambridge University Press, 2015) 290 at 305.

<sup>104</sup> Paris Agreement, above n 34, art 4.3.

<sup>105</sup> Article 4.2.

<sup>106</sup> Cole, above n 103, at 306.

<sup>107</sup> At 306.

The alternative route to establishing a breach of an international obligation, is under international law. International law is made up of customs which are practices that overtime have come to be accepted as law.<sup>108</sup> Unlike treaties which only become binding upon ratification, all states are automatically bound by custom.<sup>109</sup> Many international law obligations have been codified by treaties,<sup>110</sup> but this does not preclude the application of customary norms in their own right.<sup>111</sup>

In regard to loss and damage caused by climate change, the applicable customary principle is the (so-called) no-harm rule. This rule requires states to prevent the risk of significant transboundary harm by controlling the activities within their own jurisdiction.<sup>112</sup> The international legal system operates on the premise that all states are equal sovereigns.<sup>113</sup> Retaining this position requires states to respect one another's sovereignty, including through the prevention of transboundary harm.<sup>114</sup> The no-harm rule consists of three components.<sup>115</sup> Firstly, the existence of transboundary environmental harm.<sup>116</sup> Secondly, a causal relationship between the harm and the specific activities carried out within another stated.<sup>117</sup> Thirdly, a failure to take reasonable measures to prevent the harm.<sup>118</sup>

The no-harm rule is a due diligence obligation, meaning it is an obligation of conduct not result.<sup>119</sup> Therefore, states may attempt to defend a claim related to loss and damage on the basis that harm resulted despite them taking all appropriate measures to minimise their GHG emissions. However, given the strong scientific link between anthropogenic emissions and human-induced climate change, the threshold to discharge this duty would be very high. It is

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<sup>108</sup> John P Grant *International Law Essentials* (Dundee University Press, Dundee, 2010) at 16.

<sup>109</sup> At 14 and 17.

<sup>110</sup> At 15.

<sup>111</sup> Florentina Simlinger and Benoit Mayer "Legal responses to climate change induced loss and damage" in R Mechler, L M Bouwer, T Shinko, S Surminski and J Linnerooth-Bayer (eds) *Loss and Damage \ from Climate Change: Concepts, Methods, and Policies* (Springer, Cham, 2019) 179, at 192.

<sup>112</sup> *Stockholm Declaration on the United Nations Conference on the Human Environment* GA Res 2994/27 (1972), principle 21.

<sup>113</sup> Simlinger and Mayer, above n 111, at 186.

<sup>114</sup> At 186.

<sup>115</sup> Benoit Mayer "The relevance of the no-harm principle to climate change law and politics" (2016) 19 *APJEL* 79 at 14.

<sup>116</sup> At 14.

<sup>117</sup> At 14.

<sup>118</sup> At 14.

<sup>119</sup> *Pulp Mills on the River Uruguay (Argentina v Uruguay) (Judgment)* [2010] ICJ Rep 14 at 55.

unlikely that high emitting states would be able to satisfy the court that they have acted with the requisite degree of due diligence.<sup>120</sup>

Despite being a cornerstone of international environmental law, the relevance of the no-harm rule to climate change law has been rife with disagreement.<sup>121</sup> One reason for this, is that the principle has traditionally been applied to activities conducted at or near the border, causing harm to a directly neighbouring state. For example, in *Certain Activities Carried out by Nicaragua in the Border Area*, Costa Rica claimed that Nicaragua had caused transboundary harm in their territory by work carried out on the San Juan River.<sup>122</sup> The ICJ found that restoration of the damage was compensable under international law.<sup>123</sup> However, this is not to say that the rule cannot apply to climate change and harm caused to non-neighbouring states. It just means that the issue of causation is more complex.

The relationship between treaties and customs is reciprocal. Just as custom is often codified, it is also possible for treaties to contribute to the development of custom.<sup>124</sup> Customary obligations are inherently flexible as their understanding is informed by the widely accepted views of the international community. Therefore, as loss and damage becomes an increasing focal point of climate negotiations, and thus incorporated into the UNFCCC regime, this has the potential to shape our understanding of the no-harm rule. For example, the no-harm rule has already evolved to require the prevention of harm to and to areas beyond national jurisdiction or control.<sup>125</sup> Eventually, utilising the no-harm rule for transboundary harm caused to a state that is not a directly neighbouring state, could become even more common place. As our world becomes increasingly globalised, it makes sense that our perception of a “neighbour” shifts with this. Diplomatic and economic ties are now equally as important as geographical ones. Given the origins and intention of the no-harm rule, it seems counter intuitive for it not to apply to the climate change which is the most severe instance of human caused harm to the environment.

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<sup>120</sup> IPCC, above n 1.

<sup>121</sup> Mayer, above n 115, at 1.

<sup>122</sup> *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v Nicaragua)* [2015] ICJ Rep 665.

<sup>123</sup> At 59.

<sup>124</sup> Grant, above n 108, at 19.

<sup>125</sup> See *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) [1996] ICJ Rep 3 at [29].

### III Other issues

#### (a) Composite acts and continuing breaches

The determination of a breach is dependent on the contents of the primary rule in question. However, the ILC Draft Articles do provide some general principles for assessing when there has been a breach. In particular, they address breaches of a continuing character, and breaches consisting of a composite act. Both of which are relevant in the context of climate change.

A composite act means a series of acts or omissions considered in aggregate as wrongful.<sup>126</sup> Article 15 establishes that a breach consisting of a composite act takes place when an act or omission, taken with other acts or omissions, is sufficient to constitute a wrongful act.<sup>127</sup> The breach then extends over the entire period that these acts or omissions are repeated and remain in non-conformity with an international obligation.<sup>128</sup> A breach consisting of a composite act was intended to cover situations such as genocide, where a breach of the primary obligation occurs once there has been a sufficient accumulation of conduct.<sup>129</sup> An analogy can be drawn to climate change, as no single act or omission is likely to constitute a breach of an international obligation. Climate change is caused by the cumulation of acts over an extended period of time, which are only considered wrongful when viewed as a whole.

Article 14 states that breaches of a continuing character extend over the entire duration that the act continues to be in non-conformity with an international obligation.<sup>130</sup> Whether a breach is continuing in nature, often parallels the distinction between obligations of conduct and result.<sup>131</sup> An obligation of result is breached at the time that the stipulated result eventuates. Obligations of conduct, however, including the obligation to prevent transboundary harm, are continuing in nature. For example, in the *Trail Smelter case*, Canada was responsible for air pollution from a Trail Smelter which was causing damage in the bordering US state of Washington.<sup>132</sup> The breach of the obligation to prevent transboundary harm continued for as long as pollution continued to be emitted. Article 4.2(a) of the UNFCCC and article 4.2 of the

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<sup>126</sup> International Law Commission, above n 86, at 62.

<sup>127</sup> Article 15(1).

<sup>128</sup> Article 15(2).

<sup>129</sup> At 62.

<sup>130</sup> Article 14.

<sup>131</sup> Verheyen, above n 77, at 236.

<sup>132</sup> *Trail Smelter Arbitration (US v Canada)* [1938] 3 UNRIAA 1905.

Paris Agreement also create obligations of a continuing nature. States would continue to be in breach of these articles for the duration that they failed to adopt national policies, create NDCs or pursue mitigation measures.

Articles 14 and 15 are important as they prevent the continuing and cumulative nature of climate change causes from being a barrier to establishing a breach of an international obligation. However, it poses an additional difficulty when it comes to establishing causation, and also has implications when it comes to the available remedies.

(b) Timing of the breach

Scientific consensus is that human activity began to influence the climate from 1830.<sup>133</sup> Given the cumulative nature of climate change, conduct from this point onwards has contributed to present and future loss and damage. However, article 13 of the ILC Draft Articles states that a breach can only be established if the state was bound by the relevant obligation at the time the act or omission occurred.<sup>134</sup> This creates a guarantee against retrospective responsibility.<sup>135</sup>

The earliest multilateral climate agreement, the UNFCCC, did not come into existence until 1992. Therefore, a significant portion of historical global emissions, including the industrial revolution, cannot be the basis for a breach of existing and future treaties. This also poses a barrier under the no-harm rule where the obligation on states is to not “*knowingly* allow its territory to be used for acts contrary to the rights of other states”.<sup>136</sup> However, continued emissions from the point that treaty obligations arose or the effects of anthropogenic emissions became known are most likely sufficient to constitute a breach. Continued emissions create an “excess” contribution to already high concentrations of GHGs, such that transboundary harm is likely to result.<sup>137</sup> This is consistent with tort theory, whereby a tortfeasor will be held responsible for the entire damage, despite part of their behaviour not being unlawful.<sup>138</sup>

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<sup>133</sup> Ian Sampler “Human induced climate change began earlier than previously thought” (24 August 2014) The Guardian <[www.theguardian.com/international](http://www.theguardian.com/international)>.

<sup>134</sup> International Law Commission, above n 86, art 13.

<sup>135</sup> At 57.

<sup>136</sup> *Corfu Channel (United Kingdom v Albania)* [1949] ICJ Rep 4 at 22.

<sup>137</sup> Verheyen, above n 77, at 265.

<sup>138</sup> At 265.

## B Attribution

In order for an internationally wrongful act to entail the responsibility of a state, the act or omission must be attributable to that state.<sup>139</sup> Attribution is the operation of attaching the given act or omission to a state, such that it can be considered as the conduct of that state.<sup>140</sup> A state is an organised entity with full authority the act under international law.<sup>141</sup> The actions of states are conducted through its agents or representatives acting on its behalf.<sup>142</sup> This requires a sufficiently proximate relationship between the acting individual or group, and the state.<sup>143</sup> In the broadest sense, the conduct of an individual or group is linked to the state by nationality or residence.<sup>144</sup> However, for the purpose of state responsibility, attribution has stricter requirements. Articles 4 to 11 of the ILC Draft Articles set out the rules for attribution. The most obvious examples of conduct that is attributable to the state is the conduct of state organs (article 4) or entities empowered to exercise governmental authority (article 5). Article 7 clarifies that states are also bound by the unauthorised conduct of its organs or entities acting in its official capacity.<sup>145</sup>

The complicating factor in the context of climate change, is that the majority of GHG emissions which contribute to climate change, and therefore cause loss and damage, come from private corporations.<sup>146</sup> Such conduct may have been lawful so far as the actor is concerned, given that the conduct of private entities is not regulated by international law.<sup>147</sup> Therefore, attribution to the state is necessary to establish that there has been a breach of an international obligation. However, private corporations do not fall within the category of state organ under article 4, and unless the corporation is empowered to exercise governmental authority, its conduct also falls outside the scope of the article 5.

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<sup>139</sup> International Law Commission, above n 86, art 2.

<sup>140</sup> At 36 and 38.

<sup>141</sup> At 35.

<sup>142</sup> At 35.

<sup>143</sup> Joanna Kulesza *Due Diligence in International Law* (Brill Nijhoff, Leiden, 2016) at 151.

<sup>144</sup> International Law Commission, above n 86, at 38.

<sup>145</sup> At 45.

<sup>146</sup> Three quarters of New Zealand's greenhouse gas profile is made up of the emissions from just 15 companies. See Marc Daalder "Revealed: New Zealand's worst climate polluters" (25 October 2022) Newsroom <[www.newsroom.co.nz/revealed-new-zealands-worst-climate-polluters](http://www.newsroom.co.nz/revealed-new-zealands-worst-climate-polluters)>.

<sup>147</sup> International Law Commission, above n 86, at 53.

The general rule is that, in the absence of a specific undertaking or guarantee, the acts of private individuals or groups which do not fall within the categories of the ILC Draft Articles are not attributable to the state.<sup>148</sup> This section puts forward two arguments to bring the conduct of private persons within the ILC Draft Articles. Firstly, framing the breach as an omission of the state. Secondly, through the application vicarious liability principles under articles 8 or 11.

### *I Framing the breach as an omission*

Kulesza argues that it is possible for a state to be held responsible for the effects of the conduct of individuals where it failed to exercise due diligence to prevent these effects.<sup>149</sup> By framing the breach as a failure to exercise adequate due diligence to prevent the effects of climate change, this omission is directly attributable to the state under article 4.

Under international treaties, states have duties to reduce GHG emissions and implement mitigation measures.<sup>150</sup> Therefore, a failure to do so is attributable to the state regardless of the source of emissions.<sup>151</sup> Alternatively, under the no-harm rule, the failure of the state to regulate high-emitting industries can be seen as falling below the requisite standard of due diligence to prevent transboundary harm. This was the logic used by the Judge Shahabuddenn in the 1992 *Nauru case* concerning mining of phosphate lands.<sup>152</sup> He stated that it is not possible to conceive the conduct of a major industry as being totally separate and beyond the control of the powers of the state.<sup>153</sup>

### *II Vicarious liability*

Vicarious liability describes the situation where someone is held liable for the conduct of another, based on a closely connected relationship.<sup>154</sup> The classic situation being an employer and employee relationship.<sup>155</sup> Similar principles can be employed to attribute the conduct of private corporations to the state.

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<sup>148</sup> At 38.

<sup>149</sup> Kulesza, above 143, at 159.

<sup>150</sup> For example, Article 4 of UNFCCC, see above n 33; and Article 4 Paris agreement, see above n 34.

<sup>151</sup> Verheyen, above n 77, at 239.

<sup>152</sup> *Certain Phosphate Lands in Nauru (Nauru v Australia) (Judgement)* [1991] ICJ Rep 240.

<sup>153</sup> At 281 per Judge Shahabuddenn.

<sup>154</sup> Stephen Todd *Todd on Torts* (8<sup>th</sup> ed, Thomson Reuters, Wellington, 2019) at 1214.

<sup>155</sup> At 1220.

Articles 8 and 11 contemplate situations where the conduct of private persons, despite not being empowered by the state, is nonetheless attributable to the state. Under article 8, the conduct of a person or group is attributable to the state if that person or group is acting under the control or instruction of the state in carrying out the conduct.<sup>156</sup> This requires a factual relationship between the actor and the state.<sup>157</sup> “Instruction” implies a greater degree of prescription by the state. “Direction or control”, however, are more general concepts which could be perceived as applying to the relationship between the state and private emitters. In the *Tadić case*, it was stated that the degree of control necessary to attribute the acts of private individuals to the state varies according to the factual circumstances of the case.<sup>158</sup> It can be argued that in the case of climate change, the role of the state in regulating the overall emissions profile of that state is a sufficient degree of control to satisfy the requirements of attribution.

Under article 11, the conduct of a person or group is attributable to the state to the extent that the state acknowledges or adopts the conduct in question as its own.<sup>159</sup> The purpose of article 11 is to attribute conduct to a state where, by way of acknowledgment and adoption, they have indicated an intention to assume responsibility for that conduct.<sup>160</sup> Therefore, an argument can be made that by permitting the harmful activity to occur without adequate monitoring and enforcement, the state has passively approved that conduct, and thus, assumed responsibility for it.

Arguments pertaining to vicarious liability may be seen as pushing the intended limits of state responsibility, given the general rule that the acts of private individuals cannot be grounds for state responsibility.<sup>161</sup> However, the rules of attribution as currently defined are not an accurate reflection of the growing role of private bodies in the international realm.<sup>162</sup> Returning to the main functions of state responsibility (providing legitimacy to primary rules and a right of redress to injured parties) lends support to the principles of vicarious liability. The role of state responsibility is to require states, within their capabilities, to prevent harm to other states.<sup>163</sup>

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<sup>156</sup> International Law Commission, above n 86, art 8.

<sup>157</sup> At 47.

<sup>158</sup> *Prosecutor v Duško Tadić (Judgment)* ICTY Appeals Chamber IT-94/1-A, 6 November 1999 at [117].

<sup>159</sup> International Law Commission, above n 86, art 11.

<sup>160</sup> At 53.

<sup>161</sup> At 38.

<sup>162</sup> Kulesza, above 143, at 278.

<sup>163</sup> International Law Commission, above n 86, at 48.



A state which fails to meet this duty is to bear the responsibility for its actions or omissions. In the context of loss and damage due to climate change, upholding this purpose requires the introduction of state responsibility for the actions of private corporations acting within that states jurisdictions and control.

### C Causation

Causation is relevant to state responsibility in two ways. Firstly, where it is necessary to determine a breach of the primary rule.<sup>164</sup> For example, establishing a breach of the no-harm rule requires a causal relationship between the harm and the specific activities carried out within another stated. The claimant must prove by clear and convincing evidence that emissions originating from the defendant state caused injury of serious consequence.<sup>165</sup> A failure to fulfil obligations under article 4.2(a) of the UNFCCC or article 4.2 of the Paris Agreement, on the other hand, are not reliant on proof of damage. Secondly, causation is relevant to the remedial function of state responsibility.<sup>166</sup> Article 34 requires that states make full reparation for any injury *caused* by the internationally wrongful act.<sup>167</sup> Since loss and damage is ultimately concerned with compensation, causation is a necessary element to adequately address loss and damage under the law on state responsibility. However, it has proved to be the reoccurring barrier to climate change litigation, both internationally and domestically.<sup>168</sup>

Causation is the establishment of a causal relationship between certain legally relevant behaviour and loss or injury.<sup>169</sup> Verheyen draws a distinction between general and specific causation in the context of loss and damage due to climate change.<sup>170</sup> General causation requires proof of a link between anthropocentric emissions and climate change, whereas specific causation requires proof that specific loss or damage is the result of particular anthropocentric emissions.<sup>171</sup> While there is strong scientific evidence of the former,<sup>172</sup> the

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<sup>164</sup> Ilias Plakokefalos “Causation in the law of state responsibility and the problem of overdetermination: in search of clarity” (2015) 26 EJIL 471 at 474.

<sup>165</sup> *Trail Smelter Arbitration*, above n 132.

<sup>166</sup> Plakokefalos, above n 164, at 474.

<sup>167</sup> International Law Commission, above n 86, art 34.

<sup>168</sup> See for example, *Smith v Fonterra Co-Operative Group Ltd* [2020] NZHC 419, [2020] 2 NZLR 394.

<sup>169</sup> Verheyen, above n 77, at 249.

<sup>170</sup> At 257.

<sup>171</sup> At 257.

<sup>172</sup> IPCC, above n 1.

latter is much more difficult to establish. It is virtually impossible for an injured state to point to one state and prove that their emissions caused the claimed loss or damage.

Climate change has numerous concurrent causes, making it difficult to establish that removing the defendant states wrongful conduct would have an effect on the overall impacts of climate change.<sup>173</sup> Plakokefalos describes the existence of multiple causes contributing to a harmful outcome as “overdetermination”.<sup>174</sup> This plurality of polluters and polluting activities, makes the traditional ‘but for’ test of little assistance in the context of climate change.<sup>175</sup> Therefore, harms caused by a diverse set of causes pose a unique difficulty for state responsibility.<sup>176</sup> These difficulties with causation mean that climate change, a harm to which everyone has contributed, becomes a harm for which no one is responsible.<sup>177</sup>

In order to get around this unsatisfactory result, the ‘substantial factor test’ provides an alternative to approach to assessing causation. It can be employed in situations, such as climate change, where multiple parties and activities have all contributed to the legally relevant outcome.<sup>178</sup> Under this approach, *contribution* to the harm is sufficient to establish causation.<sup>179</sup>

Such modification to the traditional but for test is supported by scientific conceptions of causation. Causation, as a legal term, is based on linear reasoning and logic.<sup>180</sup> Judges are forced to ignore causally relevant issues because they are not legally relevant to the specific dispute between a plaintiff and defendant.<sup>181</sup> This legal constraint results in an artificial application of causation. Scientific causation, on the other hand, is non-linear and relies on assumptions.<sup>182</sup> Cause and effect relationships are often determined without 100 per cent certainty.<sup>183</sup> Science also allows for the possibility that the cause of an event is the sum of

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<sup>173</sup> Verheyen, above n 77, at 253.

<sup>174</sup> Plakokefalos, above n 164, at 472.

<sup>175</sup> Verheyen, above n 77, at 253.

<sup>176</sup> Plakokefalos, above n 164, at 472.

<sup>177</sup> Douglas A Kysar “What Climate Change Can Do About Tort Law” (2011) 41 Environmental Law 1 at 4.

<sup>178</sup> Verheyen, above n 77, at 255.

<sup>179</sup> At 255.

<sup>180</sup> At 249.

<sup>181</sup> Plakokefalos, above n 164, at 476.

<sup>182</sup> Verheyen, above n 77, at 249.

<sup>183</sup> At 249.

conditions.<sup>184</sup> Therefore, the substantial factor test is more in line with the non-determinate theories of causation used in science.

There are several instances in a legal context, particularly in tort law, where courts have challenged the traditional approach to causation. For example, the proposition that conduct can be a cause in fact of the harm if it was a substantial factor in producing it, was applied in the United States case of *Woodyear v Schaeffer*.<sup>185</sup> It was stated that:<sup>186</sup>

“One drop of poison in a person’s cup may have no injurious effect. But when a dozen, or twenty, or fifty, each put in a drop, fatal results may follow. It would not do to say that neither was to be held responsible”.

The House of Lords in *Fairchild v Glenhaven Funeral Services Ltd* adopted a similar approach to causation in response to the claimants argument that their employer had acted negligently in exposing them to asbestos, resulting in them contracting of lung cancer.<sup>187</sup> The Court concluded that proof that the defendant’s conduct increased the risk of the plaintiffs contracting lung cancer, was sufficient to satisfy causation.<sup>188</sup> Despite the reluctance of subsequent cases to extent the principle in *Fairchild*,<sup>189</sup> it lends support to the possibility of an alternative test for causation in cases involving cumulative causes.

German criminal law utilises similar logic, holding a person responsible for an increase in risk which materialises in damage.<sup>190</sup> This reasoning is applicable to climate change, where every instance of emissions increases the risk of loss and damage by contributing to climate change generally.

Ultimately, the purpose of legal causation is to determine whether a person should be liable for a certain injury.<sup>191</sup> This normative analysis asks if the harm is proximate enough that the primary rule should extent to protect the plaintiff by imposing responsibility on the

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<sup>184</sup> At 249.

<sup>185</sup> *Woodyear v Schaefer* 57 Md 1 (Md 1881).

<sup>186</sup> At 10.

<sup>187</sup> *Fairchild v Glenhaven Funeral Services Ltd* [2002] UKHL 22, [2003] 1 AC 32 at [3].

<sup>188</sup> At [65].

<sup>189</sup> See for example, *Barker v Corus (UK) Ltd* [2006] UKHL 20, [2006] 2 AC 572 at [64] where it was regard as a “narrow exception”.

<sup>190</sup> Verheyen, above n 77, at 301.

<sup>191</sup> At 250.

defendant.<sup>192</sup> In the context of climate change, where loss and damage is caused by multiple contributors, this purpose will be better upheld by adopting the substantial factor test. It would be inequitable to expect injured states to bear the impossible burden of apportioning which contribution caused which damage.<sup>193</sup>

#### *D Remedies*

State responsibility has an important public law function.<sup>194</sup> It serves as an acknowledgment that the one state is culpable for the harm caused to another. However, unless responsibility also gives rise to legal consequences, loss and damage cannot be adequately addressed. Therefore, the remedial function of state responsibility is extremely important. Articles 28 to 39 deal with the legal consequences for responsible states.<sup>195</sup> Namely, that states responsible for an internationally wrongful act are to cease that act, and make full reparation for injury caused.<sup>196</sup>

#### *I Cessation*

The aim of cessation is to put an end to the internationally wrongful conduct and safeguard the continuing compliance with the primary rule.<sup>197</sup> Therefore, cessation only applies to international wrongful acts of a continuing character. However, due to the cumulative nature of conduct causing climate change, it is hard to point to a specific act which the defendant state is required to cease. Unless they were to drastically decrease their total emissions, then they are still engaging in conduct likely to cause harm, or at least increase the risk of harm materialising. Furthermore, the remedy of cessation is focused on the prevention of future harm, as opposed to address loss and damage that has already manifested. In some instances, such as freeing of a hostage, cessation and reparation will have the same result.<sup>198</sup> The same cannot be said for loss and damage caused by climate change. Therefore, reparations are the more appropriate remedy likely to be sought in order to address loss and damage.

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<sup>192</sup> Plakokefalos, above n 164, at 475.

<sup>193</sup> Verheyen, above n 77, at 256.

<sup>194</sup> Plakokefalos, above n 164, at 475.

<sup>195</sup> International Law Commission, above n 86, at 38

<sup>196</sup> Article 30 and 31.

<sup>197</sup> At 89.

<sup>198</sup> At 89.

## II *Reparation*

Under article 31, responsible states are under an obligation to make full reparation for the injury caused by the internationally wrongful act.<sup>199</sup> This is a codification of the principle expressed in *Factory of Chorzów*, that reparations must, “as far as possible, wipe out all consequences of the illegal act and establish the situation which would ... have existed had that act not been committed”.<sup>200</sup> The obligation to provide full reparation for an internationally wrongful act has been regarded as a bedrock principle of international law.<sup>201</sup> It is also a crucial aspect or any response to loss and damage, as reparation serves as a recognition of the historic and ongoing injustices resulting from the disproportionate effects of climate change.<sup>202</sup>

Reparation can take the form of restitution, compensation, or satisfaction.<sup>203</sup> Restitution requires the responsible state to re-establish the situation which existed before the wrongful act was committed.<sup>204</sup> Compensation requires the responsible state to compensate for financially assessable damage which cannot be made good by restitution.<sup>205</sup> Satisfaction, available where restitution and compensation cannot provide full reparation, requires the responsible state to make an acknowledgement of the breach, express of regret, or formal apology.<sup>206</sup> In the context of loss and damage, satisfaction is ironically unsatisfactory. Ultimately, it is compensation that vulnerable states are demanding. For damage which is repairable, compensation is one and the same as restitution. For losses which cannot be made good by restitution, compensation is the next best available remedy.

Adopting a substantial factor test to determine causation lowers the threshold for establishing responsibility, and may create a risk that states will be exposed to liability which goes beyond their share of responsibility for the harm. There are two compounding factors which lead to this concern. Firstly, article 46 states that where several states are injured by the same

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<sup>199</sup> Article 31.

<sup>200</sup> *Factory at Chorzów (Germany v Poland) (Merits)* (1928) PCIJ (series A) No 13, at 47.

<sup>201</sup> Martins Paparinskis “A case against crippling compensation in international law of state responsibility” 83 MLR 1246 at 1246.

<sup>202</sup> Keston K Perry *Realising climate reparations: towards a global climate stabilization fund and resilience fund programme for loss and damage in marginalised and former colonised societies* (United Nations Association of the United Kingdom, 2020) at 3.

<sup>203</sup> International Law Commission, above n 86, art 34.

<sup>204</sup> Article 35.

<sup>205</sup> Article 36.

<sup>206</sup> Article 37.

internationally wrongful act, each has the ability to separately invoke state responsibility against the wrongdoer state.<sup>207</sup> Secondly, article 47 states that where there are several responsible states, the responsibility of each state may be invoked such that each is independently responsible for the full extent of the damage.<sup>208</sup>

In order to avoid the risk of undue liability, an alternative approach of proportionate liability could be justified. Accordingly, a state's liability would be relative to their degree of fault. Whether partial reparation is permitted under the ILC Draft Articles is up for debate. Article 31 explicitly provides that states are under an obligation to make *full* reparation. Restitution and satisfaction are subject to the qualification of proportionality.<sup>209</sup> The only qualification to compensation, however, is that it limited to financially assessable damage.<sup>210</sup> The ILC made a purposeful decision to not qualify the obligation for full reparation in instances of crippling compensation.<sup>211</sup> An earlier version of the ILC Draft Articles stated at article 43(3) that reparation must not result in depriving the population of a state of its own means of subsistence.<sup>212</sup> The decision to remove this rule can be interpreted as an unqualified endorsement of the requirement for full compensation.

However, a strong case can still be made for the application of proportionate liability. The rational underlying articles 46 and 47, and the requirement for full reparation generally, is that the need to compensate the victim outweighs the imposition of full liability on the wrongdoer. However, a proportionate approach can be justified in the context of loss and damage on the basis that the number of possible claims are not contained and will increase as climate change worsens. The argument that the need to protect the victim prevails whatever the cost to the wrongdoer is therefore less persuasive.

However, a proportionate approach raises issues of how to assess states' relative degree of responsibility. For example, how much weight should be given to historic emission compared to contemporary, and total emissions compared to per capita? This is likely to give rise to endless debates as to how responsibility should be apportioned.<sup>213</sup> States with high historic

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<sup>207</sup> Article 46.

<sup>208</sup> Article 47.

<sup>209</sup> At 96.

<sup>210</sup> At 96.

<sup>211</sup> Martins, above n 201, at 1255.

<sup>212</sup> At 1255.

<sup>213</sup> Simlinger and Mayer, above n 111, at 191.

emissions will argue that it is unfair to impose liability for emissions that were produced at a time when impacts of those emissions were not yet well understood.<sup>214</sup> Recently industrialised countries, on the other hand, will argue that it is unfair for them to shoulder the greatest share of liability as a result of the same process of industrialisation which the aforementioned states also benefited from.<sup>215</sup> While this debate will be at the centre of any application of state responsibility, the alternative of risking exposure to full liability, will hopefully generate cooperation to reach a resolution. Either way, it will be crucial for the ICJ to clarify how this assessment is to be made, so that the burden of proving whose share of emissions caused what damage does not fall on the injured state.<sup>216</sup>

#### *IV Climate Finance*

Loss and damage and climate finance are inextricably linked. The aim of loss and damage is to establish a general principle in international law whereby high emitting countries will be required to financially compensate low emitting countries for the adverse effects of climate change. Part III of this paper discussed the possibility that this could be achieved through the application of the law of state responsibility. This part of the paper considers climate finance as an alternative method to address loss and damage.

Climate finance is broadly defined as “local, national, or transitional financing – drawn from public, private, and alternative source of funding – that seeks to support mitigation and adaptation actions that will address climate change”.<sup>217</sup> It can consist of a variety of instruments including debt, equity investments, or grants.<sup>218</sup> In 2021, total climate finance was estimated to be US\$632 billion.<sup>219</sup> A significant portion of US\$571 was to finance mitigation activities, and no climate finance was allocated to specifically address loss and damage.<sup>220</sup>

Despite definitions of climate finance directing attention to mitigation and adaptation, climate finance mechanisms have also commonly been referenced in relation to addressing loss and

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<sup>214</sup> See for example Adelman, above n 21, at 37.

<sup>215</sup> See for example Adelman, above n 21, at 37.

<sup>216</sup> Verheyen, above n 77, at 256.

<sup>217</sup> United Nations “Introduction to climate finance” <<https://unfccc.int>>.

<sup>218</sup> Buchner and others *Global Landscape of Climate Finance* (Climate Policy Initiative, December 2021) at 15.

<sup>219</sup> At 2.

<sup>220</sup> At 1.

damage. For example, article 8.4 of the Paris Agreement cites insurance and risk pooling as important areas of cooperation to address loss and damage.<sup>221</sup> Climate finance provides a mechanism to fulfil the objective of article 8 of the Paris Agreement despite the exclusion of liability or compensation. Broberg argues that reference to loss and damage at a treaty level strengthens the basis for other financial mechanisms aimed at reparation.<sup>222</sup> Climate finance also features in the third objective of the WIM which is to enhance action and support, including finance, technology, and capacity-building to address loss and damage.<sup>223</sup> Most recently, in the lead up to COP26, climate finance featured as a top priority for many highly vulnerable countries demanding action on loss and damage.<sup>224</sup>

Climate finance regimes remove the need to bring an interstate claim for compensation, a major weakness of which is the consensual nature of climate litigation.<sup>225</sup> Litigation is not necessarily accessible to vulnerable states who will almost always have the weaker financial and diplomatic position relative to the defendant state.<sup>226</sup> Furthermore, a case by case approach is not a sustainable long term solution given that claims for loss and damage are likely to become more frequent as the state of the climate worsens. It also poses a risk of inconsistent treatment if each case is considered in isolation. However, like any regime to address loss and damage, climate finance has its own drawbacks. This section will discuss three climate finance initiatives – insurance, multilateral funds, and debt cancellation – and assess the applicability of each in addressing loss and damage.

#### A *Insurance Schemes*

Insurance schemes have been a widely supported form of finance for addressing loss and damage from the outset. AOSIS’ proposal in 1991, which is seen as the advent of loss and damage, suggested the creation of an international insurance pool.<sup>227</sup> Article 4 of the UNFCCC and article 8.4 of the Paris Agreement both make reference to insurance as something to

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<sup>221</sup> Paris Agreement, above n 34, at art 8.4.

<sup>222</sup> Broberg, above n 52, at 527.

<sup>223</sup> *Warsaw international mechanism*, above n 59, at [5].

<sup>224</sup> Stockholm Environment Institute, above n 66, at 5.

<sup>225</sup> Statute of the International Court of Justice 33 UNTS 993, art 36.

<sup>226</sup> Benoit Mayer “State responsibility and climate change governance: a light through the storm” (2014) 13 Chinese JIL 539 at 556.

<sup>227</sup> AOSIS, above n 39.



consider in implementing the objectives of the respective conventions.<sup>228</sup> Insurance has also featured prominently on the WIM agenda.<sup>229</sup> A possible reason for its appeal is that it is a more secure and timely means for securing funds than relying on the ad hoc and delayed generosity of the international community.<sup>230</sup>

Insurance is a risk transfer tool which plays a critical role in enabling economic recovery after a catastrophe.<sup>231</sup> It allows parties to transfer the risk of future economic loss, via the payment of a premium, to a second party.<sup>232</sup> The pooling of risks with this second party has the effect of collectively reducing volatility and guaranteeing liquidity to deal with post-disaster recovery.<sup>233</sup> Traditional indemnity based insurance bases pay outs on an assessment of damage caused.<sup>234</sup> Parametric insurance, on the other hand, is triggered by the occurrence of an event or a predefined set of parameters.<sup>235</sup> It also gives the flexibility of tailoring coverage, as each state can select the risks for which they require assistance, and those which they are willing to shoulder.<sup>236</sup> The main advantage of a parametric scheme is swift pay-outs, as it is not conditional on a post-event assessment of loss.<sup>237</sup> This is appropriate in the context of loss and damage as the impacts will be widespread, making loss assessments an unreasonably costly and timely process. Parametric schemes have already been implemented in regional insurance pools including the Caribbean Catastrophe Risk Insurance Facility (CCRIF) and Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI).<sup>238</sup>

There are, however, several limitations of insurance as a climate finance mechanism to address loss and damage. Firstly, it cannot cover all types of risks and losses. Insurance only covers a

<sup>228</sup> UNFCCC, above n 33, art 4; and Paris Agreement, above n 34, art 8.

<sup>229</sup> JoAnne Linnerbooth-Bayer and others “Insurance as a response to loss and damage?” in R Mechler, L M Bouwer, T Shinko, S Surminski and J Linnerooth-Bayer (eds) *Loss and Damage from Climate Change: Concepts, Methods, and Policies* (Springer, Cham, 2019) 483 at 486.

<sup>230</sup> At 491.

<sup>231</sup> John McAneney and others *Market-based mechanism for climate change adaptation* (NCCARF, 2013) at 6.

<sup>232</sup> Linnerbooth-Bayer and others, above n 229, at 485.

<sup>233</sup> At 491.

<sup>234</sup> Linnéa Nordlander, Melanie Pill and Beatriz Martinez Romera “Insurance schemes for loss and damage: fools’ gold?” (2020) 20 *Climate Policy* 704 at 705.

<sup>235</sup> At 705.

<sup>236</sup> Morten Broberg “Parametric loss and damage insurance schemes as a means to enhance climate change resilience in developing countries” (2020) 20 *Climate Policy* 693 at 696.

<sup>237</sup> At 695.

<sup>238</sup> Linnerbooth-Bayer and others, above n 229, at 694. All payments from the CCRIF have been made within 14 days of the event, illustrating the benefit of prompt pay-outs, see The Caribbean Catastrophe Risk Insurance Facility <[www.ccrif.org/](http://www.ccrif.org/)>.

portion of the full extent of loss, and cannot cover non-economic losses.<sup>239</sup> Additionally, while parametric insurance is appropriate in the context of sudden onset extreme weather events (e.g. floods or hurricanes), pay outs will not be triggered by slow onset risks (e.g. sea level rise and desertification).<sup>240</sup> Therefore, loss and damage resulting from the latter processes is not insurable. The predetermined parameters for parametric insurance also mean that the events which qualify for a pay-out will not necessarily correlate to the events that cause the most loss and damage. This could result in an inefficient distribution of money.

Secondly, insurance is unaffordable and not well understood by those that need it the most.<sup>241</sup> Ultimately, it is a western concept.<sup>242</sup> This is illustrated by the fact that insurance only covers 3 per cent of disaster loss in developing countries, compared to 40 per cent in developed countries.<sup>243</sup> Insurance places the burden on developing countries by requiring them to pay premiums.<sup>244</sup> This may be counter-intuitive and unwelcomed, and is inconsistent with the notion of CBDR.<sup>245</sup> The design of the insurance industry, which is ultimately to profit, does not sit comfortably with the rationale of affording protection to developing states.<sup>246</sup> The cost of insurance generally surpasses average losses, making it expensive compared with other financial instruments.<sup>247</sup> For example, in the Caribbean, annual premiums paid between 1970 and 1999 were on average 1.5 per cent of GDP, compared with losses which were on average 0.5 per cent of GDP.<sup>248</sup> The logic of risk aversion means that individuals or entities may be willing to pay more than expected loss in order to avoid a *catastrophic* loss.<sup>249</sup> However, for less economically developed countries, the opportunity cost of paying premiums is much greater, making insurance an unjustified expense.

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<sup>239</sup> Laura Schäfer, Koko Warner and Sönke Kreft “Exploring and managing adaptation frontiers with climate risk insurance” in R Mechler, L M Bouwer, T Shinko, S Surminski and J Linnerooth-Bayer (eds) *Loss and Damage from Climate Change: Concepts, Methods, and Policies* (Springer, Cham, 2019) 317 at 331.

<sup>240</sup> At 330.

<sup>241</sup> Nordlander and Romera, above n 234, at 707.

<sup>242</sup> At 770.

<sup>243</sup> Adleman, above n 21, at 49.

<sup>244</sup> Nordlander and Romera, above n 234, at 709.

<sup>245</sup> At 707 and 709.

<sup>246</sup> At 711.

<sup>247</sup> Linnerbooth-Bayer and others, above n 229, at 492.

<sup>248</sup> At 493.

<sup>249</sup> At 493.

Thirdly, as the impacts of climate change worsen, some risks will become uninsurable.<sup>250</sup> Insurance relies on events being random and infrequent.<sup>251</sup> As the risks of climate change become more frequent and severe, premiums will become even more unaffordable to account for this.<sup>252</sup> Furthermore, the uncertainty in the future impacts of climate change will lead to over pricing to cover a wider range of potential impacts.<sup>253</sup> By making insurance too expensive for those that need it the most, certain risks will effectively be rendered uninsurable.<sup>254</sup>

Insurance might serve a limited use in conjunction with other financial mechanisms. However, with these limitations in mind, insurance alone cannot provide an adequate mechanism to address loss and damage. Broberg argues that, provided such schemes are well-designed and complemented by other approaches, parametric insurance is a solid mechanism through which developed countries can assist vulnerable developing countries deal with the effects of climate change.<sup>255</sup> While these two qualifications are necessary, going so far as to describe insurance as a “solid” mechanism might be overstating its utility.

## *B Multilateral Climate Fund*

The concept of a multilateral fund enables states to pool resources according to CBDR,<sup>256</sup> and is a way of compensating loss and damage suffered by those unable to afford insurance premiums.<sup>257</sup> There are several existing examples of multilateral climate funds which operate at a regional level.<sup>258</sup> The Green Climate Fund is one of few examples of a global initiative, established to help developing countries reach their NDCs under the Paris Agreement.<sup>259</sup> However, there is no existing multilateral climate fund under which loss and damage qualifies for financial assistance.<sup>260</sup> Attempts to implement funds to address loss and damage have been hindered by developed states preference for global initiatives on mitigation as opposed to

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<sup>250</sup> Schäfer, Warner and Kreft, above n 239, at 331.

<sup>251</sup> Linnerbooth-Bayer and others, above n 229, at 487.

<sup>252</sup> Schäfer, Warner and Kreft, above n 239, at 331.

<sup>253</sup> At 331.

<sup>254</sup> At 331.

<sup>255</sup> Broberg, above n 236, at 700.

<sup>256</sup> Adleman, above n 21, at 49.

<sup>257</sup> At 49.

<sup>258</sup> For example, the Caribbean Catastrophe Risk Insurance Facility (CCRIF), Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), and African Risk Capacity Group (ARC).

<sup>259</sup> Green Climate Fund <[www.greenclimate.fund/about](http://www.greenclimate.fund/about)>.

<sup>260</sup> Melanie Pill “Towards a funding mechanism for loss and damage from climate change impacts” (2022) 35 *Climate Risk Management* 1 at 2.

localised support for adaptation and recovery.<sup>261</sup> There is, however, a sufficient basis for the formation of a fund specific to loss and damage under the existing climate regime. The mandate of the WIM includes enhancing action and support on finance to address loss and damage.<sup>262</sup> The Paris Agreement gives parties the ability to enhance and strengthen the WIM.<sup>263</sup> A fund is a logical mechanism to fulfil this mandate. The biggest limitation to establishing a multilateral fund, is determining the funding model. Who should contribute? How much should they contribute? And when can states draw on the fund for assistance?

Pill argues that the components of an effective funding mechanism to address loss and damage include compensation, solidarity, and insurance.<sup>264</sup> This section does not seek to establish a definitive and comprehensive funding model, but rather some principles which could guide the implementation of a multilateral fund.

The compensation component of a fund concerns the contributions of ‘responsible’ states. It is useful here to draw compassion to AOSIS’ initial proposal. Although the proposal was described as an ‘insurance pool’, it is not an insurance scheme in the technical sense.<sup>265</sup> It did not seek to establish private sector risk transfer, so instead, can be more accurately described as an international climate change compensation fund.<sup>266</sup> Contributions to the proposed fund were to be calculated according to a combination of two factors: a country’s GNP relative to the total GNP of all parties, and their CO<sub>2</sub> emissions relative to the total CO<sub>2</sub> emissions of all parties.<sup>267</sup> This formula was modelled off the 1963 Brussels Supplementary Convention on nuclear energy.<sup>268</sup>

A model which takes into account a state’s degree of responsibility as well as their ability to pay is also consistent with CBDR. It achieves the same aim as a proportionate liability approach to state responsibility discussed in Part II, but without having to satisfied the technical requirements of a legal test. It is enough to establish factual proof that a country is responsible

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<sup>261</sup> Mayer, above n 226, at 549.

<sup>262</sup> *Warsaw international mechanism for loss and damage associated with climate change impacts*, above n 57, at [5].

<sup>263</sup> Paris Agreement, above n 34, art 8.2.

<sup>264</sup> Pill, above n 260, at 4 and 5.

<sup>265</sup> Linnerbooth-Bayer and others, above n 229, at 486.

<sup>266</sup> At 486.

<sup>267</sup> Verheyen, above n 77, at 51.

<sup>268</sup> Brussels Supplementary Convention (entered into force 31 January 1963), art 2.

for a certain percentage of GHG emission, without having to establish a causal link to any loss or damage.

The most contentious issue in determining how contributions are to be assessed is the respective weight to be given to historic versus contemporary emissions. Interestingly, AOSIS' model chose to disregard historic contributions.<sup>269</sup> Contemporary emissions are an important focus as it creates an incentive for states to reduce their emissions in order to reduce contribution to the fund. However, I disagree with this proposition that historic emissions should be disregarded completely. Ultimately, a combination of historic and contemporary emissions should be accounted for. Disregarding historic emissions is likely to cause outrage among newly industrialised countries which could undermine cooperation. Historic emissions may not entail state responsibility under international law due to the rule against retrospective liability.<sup>270</sup> However, in the context of a multilateral fund, there is no need to establish a breach of an international obligation, and therefore, this same limitation does not exist.

A proposed funding model based on degree of responsibility is more in line with the reality that every state is responsible for climate change to some extent. It distributes the burdens of climate change in a manner that is consistent with the distribution of causes. Climate litigation in international law poses a risk of only addressing the extremes – the lowest polluting countries will seek reparation from the highest emitting countries. However, as Mayer noted, “the existence of polar opposites ... does not preclude the possibility of a continuum”.<sup>271</sup> A multilateral climate fund better reflects this continuum.

Climate funds have been criticised due to their perception as humanitarian assistance which has the potential to undermine the sense of ‘climate justice’ that is achieved through direct liability by way of state responsibility.<sup>272</sup> However, determining states’ contribution relative to their responsibility, as opposed to their good will and solidarity, counteracts this criticism. Furthermore, the overriding concern should be the need to address loss and damage. A multilateral fund may have a better prospect of doing so.

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<sup>269</sup> Verheyen, above n 77, at 51.

<sup>270</sup> International Law Commission, above n 86, at 57.

<sup>271</sup> Mayer, above n 226, at 544.

<sup>272</sup> Adleman, above n 21, at 50.

The insurance component of a multilateral fund is likely to take the form of a membership fee for vulnerable countries. This can essentially be regarded as a discounted premium which gives member states access to draw from the fund. It is not uncommon for climate funds to require a membership fee.<sup>273</sup> This has the potential to be seen as placing the burden on vulnerable countries. However, if the membership is nominal it can be interpreted as reflecting the fact that countries have a nominal responsibility to climate change which is consistent with CBDR.

The biggest weakness of climate funds is that contributions are voluntary.<sup>274</sup> This is where Pill's solidarity component comes in. Although there is a sufficient basis to implement a fund under the current climate regime, this regime itself relies on the voluntary ratification and commitments of states. However, this is not a unique limitation as it is also true of climate litigation.<sup>275</sup> Furthermore, there is a greater incentive to cooperate and contribute under a multilateral fund than there is under the law of state responsibility. Although this paper proposed a proportional approach to assessing reparation under state responsibility, the possibility that states will be required to pay full reparation cannot be excluded. Full reparation is ultimately what is provided for under a literal reading of the articles.<sup>276</sup> By contrast, a multilateral fund based on the proposed funding model, provides certainty to states that their contributions will not exceed their degree of responsibility. This may generate more buy-in from developed countries and make this a more appealing option to discharge their duty to make reparation for loss and damage caused due to climate change.

### C *Debt Cancellation*

Debt cancellation is an alternative, more creative solution to address loss and damage. The total external debt of all middle and low income countries is estimated to be US\$8.7 trillion.<sup>277</sup> The majority of global south countries are classified as 'critically indebted'.<sup>278</sup> Between 1990 and 2019, the total external debt of the global south countries averaged from 90 to 170 percent of their GDP.<sup>279</sup>

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<sup>273</sup> See for example CCRIF, PCRAFI, and ARC, above n 258.

<sup>274</sup> Adleman, above n 21, at 49.

<sup>275</sup> Statute of the International Court of Justice, above n 225 art 36.

<sup>276</sup> International Law Commission, above n 86, art 31.

<sup>277</sup> World Bank Group *International Debt Statistics 2022* (2021) at 9.

<sup>278</sup> Erlassjahr and Misereor *Global Sovereign Debt Monitor 2022* (January 2022), at 8.

<sup>279</sup> Dev Useer "Redesigning debt: lessons from HIPC for COVID, climate and nature" (June 2021, IIED), at 8.

However, there is parallel debt crisis which sits alongside this one. This is the concept of ‘ecological debt’. The idea being that richer countries owe poorer countries an ecological debt based on the net sum of historic environmental injustices.<sup>280</sup> The concept of an ecological debt arose in the 1990s and was driven by a combination of increasing environmental awareness and understanding of the responsibility of western countries toward environmental degradation.<sup>281</sup> Rice understands the ecological debt to have resulted from the development, production and consumption in the global north being reliant on a ‘socio-economic subsidy’ imposed on the global south.<sup>282</sup> This subsidy refers to the exploitation and under payment of natural resources and labour,<sup>283</sup> and more recently, the impacts of climate change.

In order to repay their debts, developing countries are forced to further facilitate extraction of natural resources creating a ‘vicious cycle’.<sup>284</sup> Servicing debt also requires ongoing payments which reduce national capacity to address sustainable development, climate adaptation and disaster risk reduction.<sup>285</sup> Therefore, poorer nations are expected to simultaneously surrender their wealth and suffer the impacts of the climate crisis imposed on them by richer nations.<sup>286</sup>

Debt cancellation – or ‘debt-for-climate’ swaps – have been prosed as an alternative source of climate finance.<sup>287</sup> The arrangement requires that creditors forgive debts in return for a commitment that the debtor will use the outstanding debt for climate action.<sup>288</sup> Therefore, debt cancellation has the effect of freeing up finances in developing countries to deal with loss and damage. This is consistent with the third objective of WIM to enhance action and support to build capacity to address climate change.

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<sup>280</sup> Rikard Warlenius, Gregory Pierce and Vasna Ramasar “Reversing the arrow of arrears: the concept of “ecological debt” and its value for environmental justice” (2015) 30 *Global Environmental Change* 21 at 22.

<sup>281</sup> At 21.

<sup>282</sup> James Rice “North-South relations and the ecological debt: asserting a counter-hegemonic discourse” (2009) 35 *Critical Sociology* 225 at 233.

<sup>283</sup> Warlenius, Pierce and Ramasar, above n 280, at 24.

<sup>284</sup> At 24.

<sup>285</sup> Adelle Thomas and Emily Theokritoff “Debt-for-climate swaps for small island states” (2021) 11 *Nature Climate Change* 889 at 889.

<sup>286</sup> Monbiot, above n 75.

<sup>287</sup> Thomas and Theokritoff, above n 285, at 890.

<sup>288</sup> At 890.

The main criticism against debt-cancellation as an approach to address loss and damage, is that loss and damage aside, there are other valid arguments for debt cancellation. A number of campaigns have called for cancellation of debt in the world's poorest countries on the basis that such debt is crippling, and was issued carelessly without proper regard to developing countries' ability to repay.<sup>289</sup> Therefore, it is arguably unjust to allow developed countries to discharge their obligation to address loss and damage via this means. Furthermore, while debt cancellation might be an appropriate acknowledgement of developed states' responsibility for causing the climate crisis, it does not adequately address future loss and damage.

## *V Conclusion*

Loss and damage due to climate change is not a future risk, but a present fact. As the impacts of climate change become more frequent and severe, so too will instances of loss and damage. The inequitable distribution of the burdens of climate change, mean that loss and damage is most devastating in countries that are the least responsible for its occurrence. This has seen loss and damage become a focal point of international climate negotiations. However, there is an ongoing difficulty in establishing an adequate mechanism to address loss and damage due to the reluctance of developed countries to accept responsibility, and the possibility of liability. This is the inevitable result of a geopolitical context whereby the highest emitting states are also the most influential in the international legal setting. This paper has explored the principle of loss and damage in international law, and considered two alternative routes for the mobilisation of finance to address loss and damage. Firstly, by way of reparation under the law of state responsibility; and secondly, by way of climate finance mechanisms.

In order to recover reparation by way of the law of state responsibility, it must be established that there has been a breach of an international obligation, attributable to the state, which caused loss and damage. Each of these requirements entails difficulties which are not easily resolved in the context of climate change due to the cumulative nature of its causes. This paper presented arguments to overcome each of the hurdles identified, making state responsibility a theoretically plausible solution to address loss and damage. However, the practical difficulties

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<sup>289</sup> See for example IMF "Debt relief under the heavily indebted poor countries (HIPC) initiative" (23 March 2021) <[www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/11/Debt-Relief-Under-the-Heavily-Indebted-Poor-Countries-Initiative](http://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/11/Debt-Relief-Under-the-Heavily-Indebted-Poor-Countries-Initiative)>; and Debt Justice <<https://debtjustice.org.uk>>.



in overcoming each of these hurdles must be acknowledged, as well as the overwhelming difficulty that is the consensual nature of international litigation.

We can no longer afford to kick the can down the road and treat loss and damage as an debate for another day. Therefore, it is important to consider not only the most attractive solution, but the most realistic. While state responsibility is more intuitively satisfying as it achieves a sense of culpability and climate justice, climate finance presents a more feasible approach to address loss and damage. It avoids the technical legal hurdles associated with state responsibility, such as establishing a breach and causation of harm. This paper considered three climate finance mechanisms (insurance, multilateral funds, and debt cancellation) and the strengths and weaknesses of each. It concludes that the mechanism with the most potential is a multilateral fund, under which contributions are determined according to states' relative degree of fault. This achieves the same outcome as proportionate liability under state responsibility, but with greater buy in from developed states due to the certainty that liability will be capped at a certain point. This paper also acknowledges the utility of insurance schemes and debt cancellation initiatives alongside a fund, but does not see these solutions to be adequate in and of themselves. Ultimately, a comprehensive approach to addressing loss and damage will require a combination of the mechanisms.

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