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Climate Change and Small Island Claims in the Pacific

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Abstract

When small island states – the most affected by climate change but contributing the least thereto – eventually wish to bring a claim for compensation for damage caused by climate change vis-à-vis a large emitting state, several legal barriers would stand in the way of their success. The United Nations Framework Convention on Climate Change and its Kyoto Protocol lack clear rules on compensation for damage caused by climate change. These states may gain compensation by invoking state responsibility for breach of international obligations by other states, whether in treaties or customary law; however, it is not easy to claim successfully for such responsibility because of the very nature of climate change: difficulties exist in proving which part of damage caused is due exactly to climate change and is precisely attributable to the allegedly responsible state. Efforts to grapple with these legal challenges of state responsibility might be necessary, but a more innovative approach, such as the use of insurance, should be explored in order that prompt and adequate remedies be provided to the victims.

A. Introduction

The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) indicates that climate change has indeed been occurring, and that most of the recorded increase in globally averaged temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas (GHG) concentrations.[1] It is likely that anthropogenic warming has had a discernible influence on many physical and bi-

1 IPCC (2007a:10).

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ological systems[2], and has thus impacted upon our ecosystems, lives, and economies. The Fourth Assessment Report of the IPCC makes it clear that while the impacts of future climate change will be mixed across regions, it is very likely that all regions will experience a net decline in benefits or net increase in costs from a rise in temperature greater than 2 to 3°C.[3] In terms of its causes and effects, climate change is global in nature; however, the impacts of climate change are and will be unevenly distributed. Developing countries, generally more vulnerable to and less capable of addressing these impacts, are expected to experience larger percentage losses.

Small islands, although contributing least to climate change themselves, are especially vulnerable to the effects of climate change, sea-level rise and extreme events.[4] Deterioration in coastal conditions, for example through erosion of beaches and coral bleaching, is expected to affect local resources, such as fisheries, and reduce the value of these destinations for tourism. Sea-level rise is expected to exacerbate inundation, storm surge, erosion and other coastal hazards, thus threatening vital infrastructure, settlements and facilities that support the livelihood of island communities. Climate change is projected by mid-century to reduce water resources in many small islands, such as the ones in the Caribbean and Pacific, to the point where they become insufficient to meet demand during low-rainfall periods.

Facing such reality, and in response to the announcement of non-participation in the Kyoto Protocol by the United States and Australia in 2002, Koloa Talake, Tuvalu's then prime minister, announced that Tuvalu and two other island nations, Kiribati and Maldives, planned to take legal action against major polluting countries that refused to join in the Protocol.[5] This, however, has never materialised owing to change of the Tuvalu government. Tuvalu, a low-lying, small island state in the South Pacific, has been suffering from adverse impacts of climate change, such as sea-level rise, and extreme weather events, like storm surges and floods.[6] The same is true for other small island states. Such a variety of possible injuries to their territory, human life and properties could open a number of channels for remedies

2 IPCC (2007b: 9).
3 (ibid:17).
4 (ibid.:15).
5 BBC NEWS (2002). In 2007, immediately after change of government, Australia finally ratified the Kyoto Protocol and sent the instrument of ratification to the depository on 3 December 2007. This instrument was accepted on 12 December 2007.
6 For impacts of climate change on Tuvalu, see Ralston et al. (2004).

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against GHG emitting countries or operators, especially large emitting ones, supposedly contributing to the occurrence of the injuries.[7] Affected countries could bring a claim against other countries before the International Court of Justice (ICJ) and, for any injuries relating to the marine environment, they could also bring a claim before the International Tribunal for Law of the Sea. At the same time, these countries and their inhabitants could possibly bring an action before the national courts of a particular country. Island inhabitants could, for instance, seek redress in United States District Courts against major GHG emitters under the Alien Tort Claims Act[8]. Furthermore, these inhabitants could submit petitions before human rights bodies: the Inuit filed a petition against the United States with the Inter-American Commission of Human Rights of the Organization of American States, asserting that the United States had violated human rights by destroying the Inuit environment and culture by means of emitted GHGs.[9]

Drastic mitigation action is essential in order that the international community would avoid dangerous climate change. Strengthening adaptation efforts is also necessary to prevent and/or mitigate adverse impacts of climate change. Even with these efforts, some adverse impacts would inevitably occur. The paper examines the question whether small island states – the most affected by climate change but contributing the least thereto – can eventually bring a claim for compensation for damage caused by climate change against large emitting countries such as the United States, and what legal barriers would stand in the way of their success. The paper also explores other options available to these vulnerable countries to grapple with increasing adverse impacts of climate change. While a number of legal channels exist for acquiring remedies, as mentioned above, the paper focuses on interstate channels for remedies, especially the ICJ.

7 For the overview of legal avenues to address climate damage, see Burkett (2012).

8 For a discussion on bringing an action against the United States under the Alien Tort Claims Act, see Reed (2002).

9 For the Inuit's petition to the Inter-American Commission of Human Rights, see Koivurova (2007:285ff.).

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B. Legal Possibility and Challenges for Bringing a Claim for Remedies for Climate Damage

The damage resulting from climate change is covered by various spheres of international law, including law of the sea and international human rights law. This section will firstly examine whether international treaties specifically on climate change could provide a remedy for damage caused (I), and then whether general international law could do the same (II).

I. Could International Treaties Specific to Climate Change Provide a Remedy for Climate Damage?: United Nations Framework Convention on Climate Change and its Kyoto Protocol

1. United Nations Framework Convention on Climate Change

a) Articles 2, 4.1 and 4.2

Immediately before the United Nations Conference on Environment and Development, countries agreed to adopt the first international treaty dealing with climate change, the United Nations Framework Convention on Climate Change (UNFCCC)[10]. The UNFCCC stipulates in its Article 2 that the ultimate objective of that convention and any related legal instruments is the stabilisation of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. While the UNFCCC provides for some commitments from all parties, including commitment to formulate and implement national programmes containing measures to mitigate climate change (Article 4.1(b)), commitments and their stringency differ depending on categories of countries, such as Annex I Parties (developed countries parties) and non-Annex I Parties (developing countries parties). Annex I Parties are obliged to adopt national policies and take corresponding measures on the mitigation of climate change and periodically to communicate detailed relevant information (Article 4.2). In addition, Annex II Parties (member countries of the Organisation for Economic Co-operation and Development (OECD)) have an obligation to provide new and additional financial resources to meet the agreed

10 Done on 9 May 1992, it entered into force on 21 March 1994. 1771 UNTS 107, 31 ILM 849 (1992).

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full costs incurred by developing country parties in complying with their obligations under the Convention (Article 4.3) and to take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies to other parties to enable them to implement the provisions of the Convention (Article 4.5).

The question arises whether these commitments provided for in the UNFCCC could trigger the international responsibility of a specific state that is not in compliance with these commitments.

Article 2 of the UNFCCC provides that:

> The ultimate objective of this Convention … is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

This ultimate objective is the one that parties to the UNFCCC collectively seek to achieve, but when and at what level the GHG concentration shall be stabilised is not clear. The way of formulating the provision is rather declaratory than mandatory. In the course of negotiations toward the adoption of the UNFCCC, some alternative texts were proposed to provide for collective obligation of parties to the UNFCCC to achieve stabilisation of the GHG concentration, but they were not adopted.[11] Such circumstances of the adoption would imply that Article 2 provides general guidance for parties in elaborating on and implementing the UNFCCC and its related legal instruments rather than a specific obligation of each party.

Article 4.1 provides for commitments from all parties: both developed and developing countries. Although these commitments are formulated in a mandatory way by using the term "shall", most of them are obligations to cooperate and obligations to promote. In addition, the chapeau of Article 4.1 leaves much to the discretion of the parties and allows them to implement their commitment by "taking into account their common but differentiated responsibilities and their specific national and regional development priorities and objectives and circumstances".

More controversial provisions from this point of view are Article 4.2 (a) and (b). Article 4.2 (a) stipulates that each developed country "shall adopt

11 Bodansky (1993:500ff.).

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national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs". It states that:

> [t]hese policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions … would contribute to such modification, and taking into account the differences in these Parties' starting points and approaches, economic structures and resource bases, the need to maintain strong and sustainable economic growth, available technologies and other individual circumstances, as well as the need for equitable and appropriate contributions by each of these Parties to the global effort regarding that objective.

Article 4.2 (b) continues to state that developed countries shall communicate detailed information on the policies and measures they adopt, as well as on their resulting projected anthropogenic emissions by sources and removals by sinks of GHGs with the aim of returning individually or jointly to their 1990 levels of these anthropogenic emissions.

Communication under Article 4.2 (b) shall be made with the aim of returning their anthropogenic emissions individually or jointly to their 1990 levels, but *when* such aim should be achieved is not clear in this provision. "Return by the end of the year 2000 to earlier levels of anthropogenic emissions" in Article 4.2 (a) does not mention a clear level of reduction and mandatory wording appears to be carefully avoided. These provisions use ambiguous and descriptive wording, rather than mandatory wording. During the negotiation, a number of alternative texts had been proposed especially by European countries and the Alliance of Small Island States (AOSIS) to set international quantified targets of stabilisation with specific schedules and timelines.[12] On the other hand, other developed countries, including the

12 For instance, Denmark put forward a proposal to reduce emissions by 20% by 2005 compared to 1990 levels. Compilation of Proposals Related to Commitments, INC/FCCC, 3d Session, U.N. Doc. A/AC.237/Misc. 7 (1991), p. 30. Negotiating text discussed in the intergovernmental negotiation committee held in December 1991 in Geneva contained the provision that as a first step, developed countries shall reduce emissions by 25% by 2010 compared to 1990 levels. Article IV(2)(C), Alternative B of the Consolidated Working Document in Report of the Intergovernmental Negotiation Committee for a Framework Convention on the Work of Its Fourth Session, U.N. GAOR INC/FCCC, 4th Session, U.N. Doc. A/AC. 237/15 (1992).

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United States, strongly objected to the introduction of quantified targets. Eventually, Article 4.2 was a compromised outcome between the two groups of countries.

Such ambiguous wording actually led to a divergence in interpretation of this Article. According to the written statement submitted by the Global Climate Coalition in the hearing before the Subcommittee on Economic Policy, Trade and Environment of the Committee on Foreign Affairs, House of the Representatives in 1993 after the adoption of the UNFCCC indicates[13] that:

> The U.S. position has always been that these agreements do not create binding targets or timetables for reductions of greenhouse gas emissions. As the Counsellor to the President for Domestic Policy wrote to the Chairman of the House Energy and Commerce Committee, "there is nothing in any of the language which constitutes a commitment to a specific level of emissions at any time."[14] The counsellor stated:
> The word 'aim' [of subparagraph (b)] was carefully chosen, and it does not constitute a commitment, binding or otherwise. Nor does this sentence prescribe or imply any kind of timetable....[B]y avoiding specific, definitive binding commitments we have put this nation in a position to respond more flexibly, and hopefully more fully, than would have otherwise been the case.

This position continued to be confirmed during the United States process for ratification of the UNFCCC. In transmitting the Convention to the President, the United States Department of State advised: "This subparagraph [2(b)] does not create a legally binding target."[15]

In contrast, the European Community then provided a different interpretation. Portugal issued a statement on behalf of the European Community, on the occasion of the signature by the European Community, characterising the UNFCCC as establishing a "commitment to introduce measures aiming at the return of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol to their 1990 levels by

13 Committee of Foreign Affairs (1993).

14 The Committee report notes that this comes from the letter from Clayton Yeutter to John D. Dingell (May 8, 1992) (presenting White House views on final text of the Convention).

15 Letter from Arnold Kanter to President George Bush (28 August 1992) (attaching article-by-article analysis of the Convention), as reprinted in Treaty Doc. No. 38, 102d Cong., 2d Sess. viii (1992). See Committee of Foreign Affairs (1993:73–74).

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the end of the present decade."[16] Voigt assesses these Articles as follows: "if an Annex I Party has increased its emissions continually since its ratification of the UNFCCC, this could amount to a breach of treaty."[17] These widely divergent interpretations would render highly unpredictable an eventual judgment by the international courts on whether these Articles provide a specific obligation to reduce emissions. In reality, although the target year of returning emissions to 1990 levels has come and this target has not been achieved collectively, no country has yet claimed responsibility for non-compliance with the target.

b) Articles 4.4 and 4.8

Article 4.4 states that developed countries "shall also assist the developing country parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects." The provision could become a legal basis for claiming payment for adaptation costs; however, to what extent costs of adaptation are to paid to developing countries by which country is not clear from this provision. Developing countries seeking aid for adaptation costs may have difficulty in proving causation, for instance in the case of sea-level rise. It is difficult to establish which part of sea-level rise may be due to climate change and which to natural variability.

Article 4.8 provides:

> [I]n the implementation of the commitments in this Article, the Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures.

While this provision provides guidance for the implementation of Article 4, it is too general to provide a specific obligation.

16 See Bodansky (1993:517 note 401). Statement by Anibal Cavaco Silva, Prime Minister of the Portuguese Republic on Behalf of the European Community and Its Member States on the Occasion of the Signature by the Community of the Convention (June 1992).

17 Voigt (2008).

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2. Kyoto Protocol

The Kyoto Protocol[18], adopted at the third session of the Conference of Parties (COP) to the UNFCCC, held in Kyoto in 1997, stipulates that developed country parties (Annex I Parties) ensure that their aggregate anthropogenic carbon dioxide (CO_2) equivalent emissions of the GHGs do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B (Article 3(1)). This quantified target for developed countries is much clearer compared to commitments provided for in the UNFCCC. It would therefore be much easier for countries to claim remedies for non-compliance with the target. The Kyoto Protocol, through its Conference of the Parties serving as the meeting of the parties (COP/MOP) decision, has established its compliance procedure and mechanism to address cases of non-compliance with the provisions of the Protocol, including non-compliance with the quantified target.[19] In the case of non-compliance with the quantified target, the following consequences are to be applied to the non-compliant party by the Compliance Committee: (a) further reduction for the second commitment period of emissions equal to 1.3 times the amount in tonnes of excess emissions; (b) development of a compliance action plan to meet its target; and (c) suspension of the eligibility to make transfers under emissions trading. These consequences do not include any measure relating to compensation for damage due to such non-compliance.

The question may arise whether a party claiming to have suffered damages due to non-compliance by any other party may still invoke responsibility for such damage despite the presence of compliance procedure and mechanisms specific to and inside the Kyoto Protocol regime. Such a special regime does not automatically preclude the possibility of invoking the responsibility.[20] Especially, upon ratification of the UNFCCC and its Kyoto Protocol, several small island states declared that the provisions of the UNFCCC and of the Kyoto Protocol "shall in no way constitute a renunciation of any rights under

18 Adopted on 11 December 1997, it entered into force on 16 February 2005. 2303 UNTS 148, 37 ILM 22 (1998).

19 Decision 27/CMP.1 Procedures and mechanisms relating to compliance under the Kyoto Protocol, FCCC/KP/CMP/2005/8/Add.3, 92-103.

20 Simma & Pulkowski (2006); Fitzmaurice & Redgwell (2000).

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international law concerning State responsibility for the adverse effects of climate change".[21]

In summary, both the UNFCCC and its Kyoto Protocol provide some provisions relating to mitigation and adaptation. By claiming responsibility for non-compliance with these provisions, countries might succeed in mitigating future impacts of climate change through enhanced mitigation. However, full implementation of mitigation actions under these provisions is not able to address current adverse impacts of climate change, since these impacts derive from emissions in the past. On the other hand, ensuring implementation of adaptation might reduce risk of climate change impacts that occur or are likely to occur.

Although there are provisions in both the UNFCCC and its Kyoto Protocol to oblige developed countries to provide assistance to developing countries for mitigation and adaptation through financing, technology transfer and capacity-building, it remains unclear *which* developed countries would pay for cost of mitigation and adaptation and *how much* they would pay. There's no clear provision on compensation for damage caused as a result of climate change. Such lack of clarity of primary rules would constitute one of the barriers for countries claiming responsibility for damage caused by climate change.

II. General Obligation of States to Prevent Transboundary Damage to the Environment in the Context of Climate Change

Though neither the UNFCCC nor its Kyoto Protocol provide clear provisions about possible compensation for damage caused by climate change, states have a general obligation to prevent transboundary damage to the environment. This general obligation derives from the arbitral judgment of the Trail Smelter Case (1941).[22] The formulation of obligation of states in the judg-

21 For declarations made upon ratification of the UNFCCC by Fiji, Kiribati, Nauru, Papua New Guinea and Tuvalu, see http://treaties.un.org/pages/ViewDetailsIII.aspx?&src=TREATY&mtdsg_no=XXVII~7&chapter=27&Temp=mtdsg3&lang=en, last accessed 30 April 2013. For declarations made upon ratification of the Kyoto Protocol by Cook Islands, Kiribati, Nauru and Niue, see http://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-a&chapter=27&lang=en, last accessed 30 April 2013.

22 *Trail Smelter* (*United States v Canada*), 16 April 1938 and 11 March 1941, Reports of International Arbitral Awards, Vol. III, 1905-1982, especially page 1965.

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ment has evolved to the obligation of states to prevent transboundary damage to the environment as declared in Principle 21 of the Stockholm Declaration (1972)[23] and consecutively reaffirmed by Principle 2 of the Rio Declaration (1992).[24] The obligation has evolved so as to acquire the status of general obligation under international law, which has been confirmed by the ICJ in its Advisory Opinion of the Legality of the Threat or Use of Nuclear Weapons.[25] The ICJ confirms as follows:

> The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.

Numerous multilateral environmental agreements also contain this obligation, starting with the 1982 United Nations Convention of Law of the Sea (UNCLOS)[26] (Article 194.2) and the 1992 Convention of Biological Diversity[27] (Article 3).

The obligation of states to prevent transboundary damage to the environment is obligation of due diligence. According to the 2001 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities adopted by the International Law Commission,[28] obligation of due diligence means that states are under an obligation to take unilateral measures to prevent significant transboundary harm or at any event to minimise the risk thereof arising out of their activities.[29] The standard of due diligence depends on what is generally considered to be appropriate and proportional in relation to the degree of risk of transboundary harm in the particular instance. The required

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23 Stockholm Declaration on the Human Environment, in Report of the United Nations Conference on the Human Environment, UN Doc.A/CONF.48/14, at 2 and Corr.1 (1972).

24 Rio Declaration on Environment and Development, in Report of the United Nations Conference on Environment and Development, UN Doc. A/CONF.151/26 (Vol. I), 12 August 1992, Annex I.

25 *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, *ICJ Reports 1996*, 19, para. 29.

26 Concluded on 10 December 1982, it entered into force on 16 November 1994. 1833 UNTS 3, 21 ILM 1261 (1982).

27 Adopted on 5 June 1992, it entered into force on 29 December 1993. 1760 UNTS 79, 31 ILM 818 (1992).

28 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, Report of the International Law Commission on the Work of its fifty-third session, 148–170.

29 (ibid:154f.).

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degree of care is proportional to the degree of hazard involved. The degree of care in question is that expected of a good government; however, it would alter according to the capabilities and resources that are available to that state. The degree of harm itself should be foreseeable and the state must know, or should have known, that the given activity has the risk of significant harm. The obligation would trigger international responsibility of a non-complying state if that state violates the obligation and if it is evidenced that it has caused the damage to the environment.

In the context of climate change, compatibility with the obligation of a state emitting GHG should thus depend on whether the state satisfied the degree of due diligence by taking appropriate and reasonable mitigation actions to prevent significant transboundary harm or to minimise the risk thereof arising out of its emission, required based on its capabilities in light of the level of hazard of the emission and its foreseeability.

III. Potential Legal Barriers to Invoking International Responsibility in the Context of Climate Change

1. Entitlement to Invoke State Responsibility as Injured State

When a state claims compensation for damage, the state may invoke international responsibility of the other state/states by arguing that that state/states has committed an internationally wrongful act against the claiming state through breach of international law, whether customary law or treaty. Although there is no international treaty concerning responsibility of states for their internationally wrongful acts, most rules exist in the form of customary law. The International Law Commission has sought to formulate, by way of codification and progressive development, the basic rules of international law concerning the responsibility of states in the form of the Draft Articles on Responsibility of States for Internationally Wrongful Acts (hereinafter, referred to as "Draft Articles on State Responsibility").[30] These Articles are not a treaty and have no legally binding nature; however, since most of the articles have a customary status,[31] this paper bases its analysis on the Draft Articles which are a fairly good reflection of customary law.

30 International Law Commission (2001).

31 For instance, *Case Concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment of 20 April 2010, *ICJ Reports 2010*, 77, para. 273.

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The question about the right to invoke another state's responsibility is important. The standing before the ICJ and the right to invoke another state's responsibility, although closely linked, are distinct problems. However, in practice so far, in cases where a state can establish a general right to invoke another state's responsibility, it may be presumed to have standing before the ICJ.[32]

In the context of climate change, a state suffering from damage caused by climate change could bring an action against one or more states causing damage before the international courts by invoking their responsibility. However, the claiming state encounters difficulties in invoking responsibility owing to the very nature of the climate change problem.

According to the Draft Articles on State Responsibility, a state is entitled to invoke the responsibility of another state *as an injured state*[33] (Article 42). The Draft Articles list three distinct cases in which a state is considered as an injured *s*tate. Firstly, a state is entitled to be an *injured state* when the state has an individual right to the performance of an obligation (Article 42(a)) of a bilateral nature, like the one a state party to a bilateral treaty has vis-à-vis the other state party.[34]

Even though a state does not have an individual right to the performance of an obligation in question, the state may be entitled to invoke the responsibility as *injured state* when it is "specially affected" by the breach of an obligation (Article 42(b)(i)). For example, a pollution of the high seas in breach of Article 194 of the United Nations Convention on the Law of the Sea (UNCLOS) may particularly impact on one or more states whose beaches may be polluted by toxic substances. In that case, those coastal state parties to the UNCLOS should be considered as injured by the breach because they

32 Tams (2005:39f.).

33 Author's emphasis.

34 International Law Commission (2001:117–118). Multilateral treaties generally establish a framework of rules applicable to all the States parties; but some multilateral treaties involve a relationship of a bilateral nature between two parties, referred to as 'bundles' of bilateral relations". For example, the Vienna Convention on Diplomatic Relations establishes bilateral relations between particular receiving and sending States, and violations of these obligations by a particular receiving State injure the sending State to which performance was owed. See also United States Diplomatic and Consular Staff in Tehran Case. *Case Concerning United States Diplomatic and Consular Staff in Tehran (United States of America v Iran)*, Judgment of 24 May 1980, *ICJ Reports 1980*.

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are specially affected[35]. The nature or extent of the special impact that a state must have sustained in order to be considered *injured* is not defined in the Draft Articles on State Responsibility and this special condition is probably to be assessed on a case-by-case basis. In order to be considered *injured*, a state must be affected by the breach in a way that distinguishes it from other states.[36]

A state is also considered as *injured* if the performance by all the other states is a necessary condition of the performance of the obligation, and that the breach of such an obligation (the so-called "integral" or "interdependent" obligation) radically affects the enjoyment of the rights or the performance of the obligations of all the other states to which the obligation is owed (Article 42(b)(ii))[37].

In the context of responsibility for damage caused by climate change, it is difficult to argue that a state has an individual right to the performance of an obligation by other states, either under the UNFCCC and its Protocol or under general international law, given the multilateral nature of legal relationships underlying each of these obligations. Therefore, for a state to invoke responsibility as injured state, the state has to prove either that it is/was "specially affected" by the breach of an obligation or that the breach radically affects the enjoyment of the rights or the performance of the obligations of all the other states to which the obligation is owed. The latter might be possible, but perhaps only in the extreme case, for instance, where a state intentionally and continuously emits huge amounts of emissions. For the former case, while it is generally agreed that small island states are the most affected by climate change, it is certainly difficult, if not impossible, for a small island state to prove that emission of GHGs by another state specially affects the enjoyment of its rights or its performance of its obligations in a way which distinguishes it from other states. Here there is a causation problem, or a causal link problem, between the damage and the activity causing it. Almost universal consensus exists about general causation, in that increase in anthropogenic global emissions causes climate change and damage due to it. However, proving a causal link between a specific activity/emission and a specific damage, in other words attributing a specific emission by a

35 International Law Commission (2001:119).

36 (ibid.:119). An ironic situation may occur where the breach is so serious that it has broadly or generally affected countries: in this case it will be more difficult for the affected state to invoke, as an injured state, the responsibility of the errant state.

37 (ibid.:119).

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state to a specific damage, is not possible because of very complex interactive climate systems (for details, see 2.2.3 below).

2. *Broadened Right to Invoke State Responsibility: Possibility of Invoking Responsibility in the Interest of International Community*

The Draft Articles on State Responsibility have broadened the scope of the states that are entitled to invoke the responsibility of states in addition to *injured state*. "Any state other than an injured state is entitled to invoke the responsibility of another State" in either of the following 2 cases (Article 48). Firstly, a State may invoke the responsibility when the obligation whose breach has given rise to responsibility must have been owed to a group to which the State invoking responsibility belongs and it must be established for the protection of a collective interest of the group (Article 48. 1(a)). Such obligations have sometimes been referred to as "*obligations erga omnes partes*". Secondly, a State may also invoke the responsibility if the obligation in question was owed "to the international community as a whole" (Article 48.1(b))[38].

In both cases, states are acting in the collective interest not in their individual capacity by reason of having suffered injury, but in their capacity as a member of a group of states to which the obligation is owed, or as a member of the international community as a whole. In other words, in the case of breaches of specific obligations protecting the collective interests of a group of states or the interests of the international community as a whole, responsibility may be invoked by states which are not themselves injured. All or many states will therefore be entitled to invoke responsibility, often in parallel with injured states.

Invocation of responsibility by a state not injured in its own right gives rise to a more limited range of rights as compared to those of injured states. A state not injured in its own right and therefore not claiming compensation on its own account is only entitled to request cessation of the wrongful act if it still continues, and assurances and guarantees of non-repetition. In light of recent developments of international law to protect the community or collective interest such as protection of human rights and of the global environment, it is found desirable that a state or some states be in a position to

38 (ibid.:126).

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claim reparation, in particular restitution, even though there is no state individually injured by the breach. Such a claim must be made in the interest of an injured state, if any, or of the beneficiaries of the obligation breached (Article 48.2)[39]. This aspect of Draft Articles on State Responsibility is considered as a measure of progressive development, reflecting recent developments in international law.

In the context of climate change, such expansion of entitlement to invoke responsibility would allow small island states successfully to claim responsibility to seek reparation; in this case, not in their individual capacity by reason of having suffered injury, but in the interests of the group to which they belong or of the international community as a whole. Crawford, special rapporteur, has referred to it as a "victimless" breach of community obligations, a breach without a specific, identifiable victim, for instance in the event of certain obligations *erga omnes* in the environmental field such as involving an injury to global commons.[40] Within such a framework, small islands states could successfully invoke the responsibility and stop breach of international law, but it is not a matter of certainty that damage they suffer can actually attract compensation when they act in the collective interest or in the interest of the international community, and not in their own capacity.

3. Identification of the Responsible States and of Activities Causing Damage, and the Causation Problem

Perhaps the most difficult barrier to overcome is how to identify the state responsible for damage caused. In case of breach of obligations stipulated in treaties such as the UNFCCC and the Kyoto Protocol, the identification of the responsible state is relatively easy, i.e. the state that violates its obligation under treaties. In the context of climate change, the difficulty arises from the case of general obligation, such as the obligation to prevent transboundary environmental damage. Climate damage is caused by cumulative emissions from the jurisdiction of multiple states over time. The responsible states then could be multiple with the damage perhaps occurring over time, while the degree of contribution varies among states. The exact extent of contribution by each state is difficult to define and it varies according to

39 (ibid.:127).
40 Fitzmaurice (2012:22).

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different factors, starting with the period and the coverage of gases, subject to estimation of contribution.

The Draft Articles on State Responsibility deal with the situation where there is a plurality of responsible states in respect of the same wrongful act and it stipulates that in such a situation the responsibility of each responsible state may be invoked in relation to the act (Article 47). According to the commentaries on the Draft Articles on State Responsibility, Article 47 only applies to the situation where several states are responsible for "the same internationally wrongful act" through carrying out the act together, through organs jointly established by these states and through direct control by one state over other states[41]. In the situation in which several states by separate internationally wrongful conduct have contributed to causing the same damage, for instance, by polluting a river by the separate discharge of pollutants, the responsibility of each state can be invoked only for the part attributable to it. Some concepts, such as 'joint' and 'joint and several', are often used in similar situations under various domestic legal systems, but they may not be applied to international law, except where *lex specialis* (treaties) otherwise agreed among states applies. The Convention on International Liability for Damage Caused by Space Objects, for instance, provides expressly that liability is joint and several where damage is suffered by a third state as a result of a collision between two space objects launched by two states (Article 4.1). However, in international law, the general principle in the case of a plurality of responsible states is that each state is separately responsible for conduct attributable to it.[42] In the context of climate change, under such conditions, the claiming state has extreme difficulties in invoking the responsibility successfully, since it is difficult to prove which part of the damage is due exactly to climate change and is precisely attributable to the responsible state.

The analysis shows difficulty exists in invoking the responsibility for damage caused by climate change, especially by the breach of general international law. With such limits, state responsibility cannot play a great practical role in providing compensation for damage caused in this context, though playing a role in cessation of breach of international obligation. It is therefore necessary to elaborate special international rules relating to com-

41 International Law Commission (2001:125).

42 (ibid.:125). For issues relating to responsibility for damage caused by multiple state actors, see Okowa (2000:195–202).

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pensation for climate damage in order that damage suffered by vulnerable countries such as small island states should be effectively compensated.

C. *Possible Options to Effectively Address Damage Suffered by Small Island States*

In light of difficulties that small islands states are likely to face, as mentioned above, other options are to be examined. This section of the paper will examine a couple of possible and prospective options together with their merits and demerits in order to address damage suffered by small island states effectively.

I. *Seeking the Advisory Opinion from the ICJ*

Seeking the advisory opinion from the ICJ is one of the options to clarify obligations and responsibilities of states to prevent and compensate transboundary harm caused by GHG emissions. In reality, in September 2011, the Republic of Palau's President, Johnson Toribiong, speaking at the Sixty-sixth Session of the United Nations General Assembly, noted that climate change implicates the international rule of law and warrants consideration by the ICJ and called for an ICJ advisory opinion on the obligations and responsibilities of states under international law to avoid transboundary harm caused by GHG emissions.[43]

The ICJ serves two adjudicative functions: it issues judgments on disputes between states submitted before the ICJ and it also issues advisory opinions on any legal question at the request of the organs of the United Nations and specialised agencies such as the World Health Organisation (WHO) (Article 96 of the United Nations Charter). Although the advisory opinion is of an advisory nature and is not legally binding, the advisory opinions are respected as authoritative statements of the ICJ, the "principal judicial organ of the United Nations".[44]

The advisory opinion has often played a valuable role in identifying relevant international rules and in clarifying their content.[45] In its advisory

43 Toribiong (2011); United Nations Department of Public Information (2012).
44 Article 92 of the United Nations Charter.
45 Korman & Barcia (2012).

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opinion of the Legality of Threat or Use of Nuclear Weapons case, for instance, the ICJ confirmed the general obligation of states to prevent transboundary environmental damage and it also endorsed the obligation to cooperate towards nuclear disarmament. By requesting the opinion from the ICJ, small island states can expect further clarification of international rules relating to climate change including the ones relating to compensation for damage caused by climate change. Such further clarification of rules could possibly facilitate mitigation and adaptation actions by presenting clearer rules of conduct by states.

In addition, requesting the advisory opinion from the ICJ is much easier than bringing an action before the ICJ. The United Nations General Assembly, for instance, needs a simple majority for requesting the advisory opinion. On the other hand, for bringing an action before the ICJ, the claiming state has to acquire consent from other states in dispute, which is usually not easy.

II. Establishing a Mechanism Dealing with Compensation for Damage Caused by Climate Change

1. Loss and Damage in the Climate Negotiations

Another and prospective option is to establish a mechanism dealing with compensation for damage caused by climate change. As mentioned above, several legal challenges exist when small island states wish to obtain a remedy for damage caused by climate change by invoking the responsibility of states causing the damage. Difficulties exist in proving that states are specially affected and in identifying one or more responsible states among numerous states emitting greater or lesser quantities of GHGs as well as in identifying the exact extent of contribution to the "wrongful act". In the face of these difficulties, the establishment of a mechanism that would determine fair rules on these points could be a more practical and desirable solution, rather than agreeing among states to modify the current international rules on state responsibility to find a solution.

In the on-going climate negotiation, countries have discussed the possible establishment of institutional arrangements to address loss and damage associated with climate change impacts under the agenda item "Approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change to enhance adaptive capacity", in brief named "Loss and

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Damage"[46]. At COP16 (2010), parties to the UNFCCC decided to establish a work programme in order to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change.[47] Having established a work programme on this issue at COP17 (2011)[48] and having implemented its operation during the year 2012, parties decided at COP18 (2012) to establish at COP19 the "institutional arrangements, such as an international mechanism, including functions and modalities, …, to address loss and damage associated with the impacts of climate change in developing countries that are particularly vulnerable to the adverse effects of climate change".[49]

2. AOSIS International Insurance Pool Proposal in 1991

In the course of the negotiations toward the adoption of the UNFCCC, Vanuatu, on behalf of the small island states, suggested the creation of a fund – to which developed countries would contribute – to "compensate developing countries (i) in situations where selecting the least climate sensitive development option involves incurring additional expense and (ii) where insurance is not available for damage resulting from climate change".[50] Small island states then put forward a supplementary proposal to establish an international insurance pool with a view to covering the costs of climate change impacts.[51] The insurance pool proposal is to establish an international

46 For historical background of this issue in the negotiation, see Millar et al. (2013: 444–458).

47 1/CP.16 The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, FCCC/CP/2010/7/Add.1, 6–7, para. 25f.

48 7/CP.17 Work Programme on Loss and Damage, FCCC/CP/2011/9/Add.2, 5–8.

49 Decision -/CP.18 Approaches to Address Loss and Damage Associated With Climate Change Impacts in Developing Countries that are Particularly Vulnerable to the Adverse Effects of Climate Change to Enhance Adaptive Capacity (advance unedited version), para. 9, available at http://unfccc.int/files/meetings/doha_nov_2012/decisions/application/pdf/cmp8_lossanddamage.pdf, last accessed 30 April 2013.

50 Vanuatu on behalf of the Alliance of Small Island States (AOSIS), Elements for a Framework Convention on Climate Change, UN Doc. A/AC.237/Misc.1/Add.3 at 30.

51 Proposal by Vanuatu on behalf of AOSIS, A/AC.237/WG.II/CRP.8. For details, see Verheyen (2005:50).

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scheme funded by developed countries, to compensate small island states and low-lying developing countries for loss and damage resulting from the sea-level rise. Contributions to the fund were to be calculated on the basis of (i) the ratio between the gross national product (GNP) of each developed country and the total GNP of the group of developed countries and (ii) the ratio of developed country CO_2 emissions to the total CO_2 emissions of that group. The formula proposed for allocating contributions was similar to the one used in the 1963 Brussels Supplementary Convention to the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy, named the Brussels Supplementary Convention and adopted within the framework of the OECD.[52] Right to claim against the pool would trigger only when the rate of global mean sea-level rise and the absolute level of global mean sea-level rise had reached agreed figures.

While the proposal of the insurance pool mechanism had not been incorporated in the UNFCCC, it contains a number of interesting ideas that could be useful for overcoming legal challenges that states face when they invoke responsibility. Although the mechanism is named "insurance", it is actually a fund to compensate for damage from sea-level rise. By using a kind of index that triggers the right to claim, the proposal seeks to incentivise developed countries as a group to reduce emissions in order not to reach the level where the triggering right to claim against the pool is activated. In addition, the proposal obliges developed countries to contribute to the Fund depending on the degree of their responsibility for CO_2 emissions and of their capability to pay. With such a criterion for contribution, the mechanism is expected to induce developed countries to take more aggressive mitigation measures in order to limit their contribution as much as possible. Countries suffering from sea-level rise can invoke the right to claim without proving which country is responsible and to what extent. They are also exempted from proving a causal link; they can claim a payment only by showing that some prefixed index such as degree of sea level rise are met. The mechanism would institutionalise 'compensation' for the affected countries by emitting countries through establishing objectified rules on attribution of responsi-

52 Article 12 of the Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960, as amended by the additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 (Brussels Supplementary Convention), available at http://www.oecd-nea.org/law/nlbrussels.html, last accessed 30 April 2004. Protocol to Amend the Brussels Supplementary Convention was adopted but it has not yet come into force.

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bility and a causal link. The burden of proof for small island states is thus mitigated.

The mechanism, however, has a couple of weak points: one being that it lacks incentives for countries likely to be affected to take adaptation measures to avoid or mitigate adverse impacts of climate change..

Most of these ideas, starting with the establishment of a fund to better compensate victims, already have precedents in international treaties relating to environmental liability. While these precedents, which adopt a civil liability scheme (in which the victim claims for damage against the person that caused it), cannot simply be used as a model for the mechanism to deal with compensation for climate change, they may offer lessons for designing a system to compensate effectively for damage caused by climate change.

3. New Approach/Tools for the Mechanism: Insurance and Risk-pooling

In light of lessons learnt from experience and the socio-economic changes which have taken place across the world, new approaches and tools may be worth examining. One of the most relevant tools is insurance.[53] Insurance is one of the tools for risk transfer used to reduce the uncertainty and volatility associated with potential financial burden of loss and damage.[54] Commercially based insurance, sometimes publicly supported, to cover climate-change-induced loss and damage has currently expanded[55]. Even in some developing countries, microinsurance has been used especially to address weather-related damage. Microinsurance is characterised by low premiums or coverage and is typically targeted at lower-income individuals who are unable to afford or access more traditional insurance – sometimes, with some external insurance backstop such as reinsurance.[56]

Microinsurance can cover a broad range of risks: to date it has tended to cover weather risks including crop and livestock insurance. Weather insurance typically takes the index-based form, whereby payment is made if a

53 Mills et al. (2006).

54 A literature review on the topics in the context of thematic area 2 of the work programme on loss and damage: a range of approaches to address loss and damage associated with the adverse effects of climate change, Note by the secretariat, 15 November 2012, FCCC/SBI/2012/INF.14, 18ff.

55 Quinto (2010).

56 (ibid:19–20).

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chosen weather index – such as five-day rainfall amounts – exceeds some threshold. Such initiatives minimise administrative costs and moral hazard and allow companies to offer simple, affordable and transparent risk transfer solutions. One of the largest microinsurance schemes, the Weather-Based Crop Insurance Scheme, was established by the government of India and currently protects more than 700,000 farmers against the losses associated with drought.[57]

Without risk transfer such as insurance, a country or household may be faced with the full financial burden of loss and damage. Through insurance, the funds can be available more quickly than external aid and can be used more flexibly. On the other hand, insurance neither directly prevents nor reduces the risk of damage or loss, nor usually covers the full cost of loss and damage. Insurance would fit some predicted risk; however, for unexpected risk like the low probability but high risk of an extreme event, insurance might need some supplementary mechanism.

Insurance might entail some moral hazard. The person, once insured, would not try to prevent or mitigate adverse impacts since in all cases his damage would be covered by the insurance. In this case, index-based insurance might avoid such moral hazard, since the insurer pays the money to the insured whether damage has actually occurred or not. Here the insured has some incentive to prevent or mitigate adverse impacts.

Private sector involvement through insurance could provide some space for public funding, which would play a special role that the insurance cannot not play, for instance, deal with risk that insurance could not establish commercially and assist in starting up and backing up the insurance scheme, including reassurance.

Especially at the regional and international levels, the initiative for regional fund-pooling has been advancing.[58] Risk pools aggregate risk regionally, allowing individual risk holders to spread their risk geographically. Such risk-pooling allows participants to gain catastrophe insurance on better terms and access collective reserves in the event of a disaster. The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is a good example, which allows Caribbean governments to purchase coverage for earthquakes and/or hurricanes. CCRIF was able to secure USD110 million of reinsurance ca-

57 (ibid.:19). See also Manuamorn (2007).
58 (ibid:20).

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pacity in addition to its own reserves. Lower-income countries may also find that their participation in regional insurance pools could be beneficial.

D. Conclusion

Global GHG emissions are estimated to continue to increase without drastic mitigation actions, but the overall pledges by countries in the period up to 2020 are not sufficient to limit climate change and therefore adverse impacts of climate change will become greater in the future.[59] Those that contribute least to climate change, such as small island states, might suffer the most – to the extent that their existence may be threatened, with no immediate prospects of any compensation. Confirming the right to remedy for damage caused by emission would provide an incentive to countries to limit emissions. Claiming compensation from emitting countries through invoking state responsibility is one of the ways to proceed, but it would face several legal challenges. Efforts to grapple with these legal challenges of state responsibility might be welcome and necessary, but the creation of a mechanism away from the state responsibility approach (in which emitters would pay for their share in relation to their emissions, and where the victims suffering from adverse impacts of climate change receive an adequate remedy) would be a desirable option, especially if the mechanism could provide a quick and adequate remedy for the victims.

In the case of state responsibility, even though legal challenges associated with invoking it would be adequately settled, it would only provide a remedy for damage that is evidenced as climate-change induced. As mentioned in Section I.1.b), factoring out climate-change-induced damage is technically difficult, if not impossible, and only paying out a part of climate-change-induced damage would certainly not be the best option for small island states and their local population facing catastrophic damage of weather-related disaster. In addition, damage from slow-onset events such as progressive sea-level rise would be more difficult to deal with within the framework of state responsibility.

From such a perspective, it would be worth considering and exploring an innovative mechanism beyond state responsibility to provide an adequate remedy to victims for damage caused by climate change, including the use

59 UNEP (2012).

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of innovative approaches and tools, such as insurance. For those suffering from climate impacts, the provision of a full remedy and relief for disaster damage, whether climate induced or not, is most desirable. For this purpose, collaboration with relevant organisations, starting with the United Nations International Strategy for Disaster Reduction (UNISDR)[60] which has experience and expertise in the field of extreme events, is essential.

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60 For the mission and work of the UNISDR, see http://www.unisdr.org, last accessed 30 April 2013.

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