

# CHALLENGES FOR INTERNATIONAL ENVIRONMENTAL LAWYERS: CLIMATE CHANGE COMPLIANCE

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## ABSTRACT

Modern lawyers face the challenge of how to provide, at international law, legal regulatory frameworks that can help to manage major global environmental problems in the future. The advent of climate change is one of the most pressing environmental threats to humankind and the Earth's environment. Unfortunately, the current structure of international law has not developed as a system designed to deal with global environmental problems that affect all nations. The effects of climate change will adversely impact all countries, within their territorial jurisdiction as well as in the global environment beyond state jurisdiction. This paper discusses the development of the compliance and enforcement mechanisms under the *Kyoto Protocol to the United Nations Framework Convention on Climate Change* in order to determine the limitations of these mechanisms. The question posed is whether the compliance and enforcement mechanisms should undergo further reform before the next international agreement on climate change is negotiated in 2015. This paper also discusses whether new legal proposals could be useful to manage some of the consequences that are likely to occur as a result of the impacts of climate change.

## I INTRODUCTION

The challenge for lawyers is how to provide, at international law, legal regulatory frameworks that can help to manage major global environmental threats in the future. Climate change is occurring and poses risks to humankind and the Earth's environment.<sup>1</sup> Unfortunately, the current system of international law has not developed as a legal system designed to deal with global environmental problems that affect all nations. The effects of climate change will adversely affect all countries, within their territorial jurisdiction as well as in the global environment beyond state jurisdiction. This paper will consider the development of the compliance and enforcement mechanisms under the *Kyoto Protocol to the United Nations Framework Convention on Climate Change*<sup>2</sup> (*Kyoto Protocol*) and the limitations of these mechanisms.

The objective of the *United Nations Framework Convention on Climate Change*<sup>3</sup> (*UNFCCC*) 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.<sup>4</sup>

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1 Intergovernmental Panel on Climate Change (IPCC), 'Summary for Policy Makers' in *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press 2014) 3 <<http://ipcc.ch/report/ar5/wg2/>>. ('*WGII Summary for Policy Makers*').

2 *Protocol to the Framework Convention on Climate Change*, opened for signature 11 December 1997, 37 ILM 22 (1998) (entered into force 16 February 2005) ('*Kyoto Protocol*').

3 *United Nations Framework Convention on Climate Change* opened for signature 9 May 1992, 1771 UNTS 107, (entered into force 21 March 1994) ('*UNFCCC*').

4 *Ibid* art 2.

This level is to be reached within time limits that ensure ecosystems can adjust, food production is assured, and economic development can continue in a sustainable way.<sup>5</sup> Clearly, this goal is significant because without adequate enforcement of targets to reduce greenhouse gas (GHG) emissions, the objective in *UNFCCC* cannot be achieved. This paper also discusses whether recent legal proposals could be useful to manage some of the consequences that are likely to occur as a result of the impacts of climate change.

States that are parties to the *UNFCCC* agree to take climate change considerations into account in their policies and actions.<sup>6</sup> There are general commitments in the *UNFCCC* for states to publish inventories about the sources of GHG emissions and their removal through sinks,<sup>7</sup> and to take measures towards mitigation action.<sup>8</sup> Parties to the *Kyoto Protocol* reaffirmed the general commitments they had agreed to in the *UNFCCC*.<sup>9</sup> Developed country parties to the Protocol listed in Annex B of the *Kyoto Protocol* agreed to adopt targets to limit their GHG emissions.<sup>10</sup> The limits on GHG emissions differ for each country under the *Kyoto Protocol*, and states may access mechanisms to assist with their emission reductions.<sup>11</sup> The *Kyoto Protocol* sets out three mechanisms that may assist parties to comply with their targets to reduce GHG emissions. First, Joint Implementation applies to parties in Annex I of the *UNFCCC*. If Annex I countries have complied with their reporting obligations, they may agree with private-enterprise to invest in projects that produce emission reductions in another Annex I state.<sup>12</sup> So, countries may take advantage of the cheaper costs of emission reductions in the country where the project is being carried out.

Secondly, the Clean Development Mechanism encourages developed countries that are in Annex I to the *UNFCCC* to engage in projects to limit their GHG emissions and to assist developing states to mitigate the effects of climate change.<sup>13</sup> There must be genuine long-term benefits for mitigation as well as additional reductions to GHG emissions that would not occur if the project did not take place.<sup>14</sup> Advantages for developing countries participating in the Clean Development Mechanism are potential funding assistance and access to any new technology used in the project. Thirdly, the Conference of the Parties to *UNFCCC* (COP) may develop the rules for emissions trading.<sup>15</sup> Parties in Annex B of the *Kyoto Protocol* may use emissions trading to fulfil their commitments to meet targets on GHG reductions.<sup>16</sup>

Parties to the *UNFCCC* and the *Kyoto Protocol* have obligations to report inventories of GHGs and to verify this information.<sup>17</sup> The compliance and enforcement mechanisms were introduced to assist state parties to the *Kyoto Protocol*<sup>18</sup> to comply with their obligations to monitor the accounting methods used by the parties to the Protocol. The objectives of the

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5 Ibid.

6 Ibid art 4(1)(f).

7 Ibid art 1(8), which defines 'sink' as 'any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere.'

8 Ibid art 4(1)(a).

9 *Kyoto Protocol* preamble.

10 Ibid art 3.

11 Ibid Annex B.

12 Ibid art 6.

13 Ibid art 12.

14 Ibid art 12(5).

15 Ibid art 17.

16 Ibid art 17.

17 Ibid art 3.

18 Ibid art 18 'The Conference of the Parties serving as the meeting of the Parties to this Protocol shall, at its first session, approve appropriate and effective procedures and mechanisms to determine and to address cases of non-compliance with the provisions of this Protocol, including through the development of an indicative list of consequences, taking into account the cause, type, degree and frequency of non-compliance. Any procedures and mechanisms under this Article entailing binding consequences shall be adopted by means of an amendment to this Protocol.'

compliance procedures to the *Kyoto Protocol* are to enforce the Protocol<sup>19</sup> and to ensure that states meet their targets to reduce GHGs. The original targets were set to achieve reductions by 2012 but these were extended to 2020 and the aim is to achieve reductions of ‘overall emissions of such gases by at least 18 per cent below 1990 levels in the commitment period 2013 to 2020’.<sup>20</sup> Additional reductions beyond these agreements are required if the temperature rise is to be stabilised:

Without additional efforts to reduce GHG emissions beyond those in place today, emissions growth is expected to persist driven by growth in global population and economic activities. Baseline scenarios, those without additional mitigation, result in global mean surface temperature increases in 2100 from 3.7 °C to 4.8 °C compared to pre-industrial levels.<sup>21</sup>

If there are further delays in mitigation between now and 2030, it will be difficult to maintain a temperature change below 2 °C.<sup>22</sup> If the temperature rises more than 2 °C above pre-industrial levels the consequences are likely to be severe — including species extinction, impacts on food production, limitations on human activities, and the potential to trigger tipping points that cause irreversible change to the Earth’s natural systems.<sup>23</sup> The goal of enforcement in the *Kyoto Protocol* goes beyond the objectives of many other compliance procedures in international environmental law,<sup>24</sup> and this is no doubt due to the seriousness of the implications for the international community if states fail to adhere to their commitments to mitigate GHG emissions.

First, this paper reviews the limitations of the operations of Compliance Committee and the law of state responsibility. Next, key concepts of international environmental law are discussed: the common concern of humankind; intragenerational equity; common but differentiated responsibilities; and intergenerational equity. The application of these concepts could influence the ways states address climate change negotiations. Finally, proposals for the development of new legal frameworks that could assist states to deal with the consequences of the impacts of climate change in the future are considered. This paper investigates the argument that the limitations of the existing international environmental law regime on climate change compliance presents a challenge for international lawyers but does not prevent them from exploring new legal avenues to try to address these problems.

19 UNFCCC, Conference of the Parties serving as the Meeting of the parties to the Kyoto Protocol, *Report of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol on its first session, held at Montreal from 28 November to 10 December 2005 Addendum Part Two: Action taken by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session*, FCCC/KP/CMP/2005/8/Add.3 1st sess. (30 March 2006) 93, art I ‘The objective of these procedures and mechanisms is to facilitate, promote and enforce compliance with the commitments under the Protocol.’ (‘COP Report 2005’).

20 *Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change* (8 December 2012) (not yet in force) art 3.

21 IPCC ‘Summary for Policy Makers’ *Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press 2014) 9 (‘WGIII Summary for Policy Makers’).

22 *Ibid* 13. ‘Delaying mitigation efforts beyond those in place today through 2030 is estimated to substantially increase the difficulty of the transition to low longer-term emissions levels and narrow the range of options consistent with maintaining temperature change below 2 °C relative to pre-industrial levels.’

23 *WGII Summary for Policy Makers* above n 1, 14. ‘Increasing magnitudes of warming increase the likelihood of severe, pervasive, and irreversible impacts. Some risks of climate change are considerable at 1 or 2°C above preindustrial levels ... Global climate change risks are high to very high with global mean temperature increase of 4°C or more above preindustrial levels in all reasons for concern ...and include severe and widespread impacts on unique and threatened systems, substantial species extinction, large risks to global and regional food security, and the combination of high temperature and humidity compromising normal human activities, including growing food or working outdoors in some areas for parts of the year (*high confidence*). The precise levels of climate change sufficient to trigger tipping points (thresholds for abrupt and irreversible change) remain uncertain, but the risk associated with crossing multiple tipping points in the earth system or in interlinked human and natural systems increases with rising temperature (*medium confidence*).’

24 Gerhard Loibl, ‘Compliance Procedures and Mechanisms’ in Malgosia Fitzmaurice, David Ong and Panos Merkouris, (eds), *Research Handbook on International Environmental Law* (Edward Elgar, 2010) 426, 429.

## II COMPLIANCE AND ENFORCEMENT MECHANISMS

### A *Membership*

The Compliance Committee has two branches, the Facilitative Branch and the Enforcement Branch.<sup>25</sup> Membership of each is broadly based and includes representation from each of the five regional groups of the United Nations and from the small island states, two members from the Annex I parties and two members from non-Annex I parties.<sup>26</sup> Members serve in their individual capacity (rather than as a representative of a state) and act in an independent and impartial way to avoid conflicts of interest.<sup>27</sup> The aim behind these provisions is to ensure that members of these branches are not subject to political influence from their government and act in their independent capacity.<sup>28</sup> Alternate members may serve in the place of members of the Compliance Committee, and these members should be competent in the field of climate change.<sup>29</sup> Governance of these two branches could be improved by including more representation from environmental and civil society non-governmental organisations (NGOs) that have adopted codes of conduct and good governance principles. NGOs could make states more accountable<sup>30</sup> and reduce the reliance upon state representatives. At this stage there is no avenue for NGOs to participate in climate change compliance and enforcement procedures.<sup>31</sup> This failure to include the opportunity for NGOs and the public to report a state's (or states') lack of compliance with emissions reductions, results in a lost opportunity to promote more effective compliance.<sup>32</sup>

### B *Facilitative and Enforcement Branches*

A party to the *Kyoto Protocol* may report its own failure to comply with its commitments under the *Kyoto Protocol*.<sup>33</sup> Alternatively, any party may report non-compliance of another party provided that there is information to support the allegation.<sup>34</sup> The secretariat may submit to the Compliance Committee implementation issues raised in the reports of expert review teams as well as any written comments from the party concerned.<sup>35</sup> The Compliance Committee may receive additional final reports from the expert review teams<sup>36</sup> and undertakes an initial examination before it decides whether to take further action. So, the Compliance Committee may also commence action on the basis of the expert review teams' reports that are received through the secretariat.

The non-complying party is entitled to be represented before the Facilitative or the Enforcement Branch of the Compliance Committee but cannot be present during the consideration of the decision by the branch.<sup>37</sup> Each branch may base its decision upon reports of the expert review teams; information from the party concerned and the party that submitted the issue about implementation; and reports from the Conference of the Parties (COP) and subsidiary bodies, as well as from the other branch under *UNFCCC*.<sup>38</sup> Importantly, intergovernmental

25 *COP Report 2005*, above n 19, Annex art II.

26 *Ibid* art VI para 19 (Facilitative Branch), art V para 1 (Enforcement Branch).

27 *Ibid* art II [6].

28 Loibl, above n 24, 430.

29 *COP Report 2005*, above n 19, art II [6].

30 See Satoko Mori, 'Institutionalization of NGO Involvement in Policy Functions for Global Environmental Governance' in Norichika Kanie and Peter Haas (eds) *Emerging Forces in Environmental Governance* (United Nations University Press, 2004) 157, 158.

31 Eric Dannenmaier, 'The Role of Non-state actors in Climate Compliance' in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 149, 160.

32 *Ibid* 176. See Attila Tanzi and Cesare Pitea, 'Non-Compliance Mechanisms: Lessons Learned and the Way Forward' in Tullio Treves et al (eds), *Non-Compliance Procedures and Mechanisms and The Effectiveness of International Environmental Agreements* (T M C Asser Press, 2009) 569, 577.

33 *COP Report 2005*, above n 19, art VI [1].

34 *Ibid* art VI [1].

35 *Ibid* art VI [1].

36 *Ibid* art VI [3].

37 *Ibid* art VIII [2].

38 *Ibid* art VIII[3].

organisations and NGOs may provide factual and technical information,<sup>39</sup> representatives of these organisations may attend to meetings (except when they are held in private)<sup>40</sup> and can access the findings of the Compliance Committee because these are provided to the public.<sup>41</sup>

Even though the involvement of NGOs mentioned above is indicative of a movement towards a common concern pattern (to protect the interests of the global community), the responsibility for triggering the action of the Compliance Committee primarily rests upon states.<sup>42</sup> If the Compliance Committee is given the power to take action based upon reports from NGOs or the public about non-compliance, this would provide more opportunities to indicate non-compliance. There is a precedent for public reporting about compliance in *The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* which permits the public to notify non-compliance.<sup>43</sup>

The issue of submissions was raised by the submission for South Africa as chairperson of the Group of 77 and China concerning compliance of fifteen Annex I Parties to the *Kyoto Protocol*.<sup>44</sup> However, as the three-quarters majority for the proposals was not reached, no decision was made by the Facilitative Branch about whether to proceed or not.<sup>45</sup> Clearly, a change in procedures could be adopted in the future, so that interested institutions, groups of states and NGOs could make submissions to the Compliance Committee about states' failure to comply and these submissions should automatically trigger an investigation by the Compliance Committee.<sup>46</sup> This change is also likely to encourage states to comply with their commitments to reduce GHG emissions because of the damage to the reputation of their governments due to adverse publicity about their failure to adhere to the targets that they have agreed to.

### C Consequences

The aim of the 'soft' consequences applied by the Facilitative Branch for failure to comply is to provide incentives for compliance.<sup>47</sup> There are more serious consequences if the Enforcement Branch determines that an Annex I party does not comply. In the event that an Annex I party fails to meet its commitments, the Enforcement Branch may make a declaration of non-compliance and develop a plan.<sup>48</sup> The party will prepare a plan to indicate the measures that will be taken to remedy the situation.<sup>49</sup> In addition, the Enforcement Branch can impose any of the following consequences:

- Deduction from the concerned party's assigned amount from the second commitment period of 1.3 times the amount in tonnes of excess emissions;<sup>50</sup>
- Development of a compliance action plan; and
- Suspension of eligibility for transfers under article 17 of the Kyoto Protocol,<sup>51</sup> concerning emissions trading.

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39 Ibid art VIII [4].

40 Ibid art IX [2].

41 Ibid art VIII [7].

42 Jutta Brunnée, 'Common Areas, Common Heritage, and Common Concern' in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds), *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2007) 550, 572.

43 *The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice In Environmental Matters* opened for signature 25 June 1999, 2161 UNTS 447 (entered into force 30 October 2001) art 15.

44 UNFCCC Compliance Committee CC/FB/3/2006/2 6 September 2006 Facilitative Branch Third Meeting 20–22 June 2006 Bonn Germany, 'Report on the Meeting' [3b].

45 Ibid [4]. See Loibl, above n 24, 434.

46 Meinhard Doelle, Jutta Brunnée and Lavanya Rajamani, 'Conclusion: Promoting Compliance in an Evolving Climate Regime' in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 437, 441.

47 Loibl, above n 24, 435.

48 *COP Report 2005*, above n 19, art XV [1].

49 Ibid art XV [3].

50 Ibid art XV [5].

51 Ibid art XV [5].



One of the reasons that the two branches of the Compliance Committee have power to make decisions is the need for quick determinations when a party is in non-compliance. If an Annex I party is ineligible for one of the mechanisms, speedy decisions enable these mechanisms to function appropriately.<sup>52</sup> However, an appeal against a decision may lead to delay, and the concerned party may appeal to the COP against a determination of the Enforcement Branch.<sup>53</sup> In the future, it would be appropriate to consider whether an appeal procedure should be available to parties. If there is no appeal process this would minimise delays.

The Enforcement Branch has considered questions about implementation concerning a number of countries that may have failed to adhere to their commitments, and most of these questions have eventually been resolved.<sup>54</sup> Even though the Compliance Committee is attempting to ensure that parties adhere to their commitments under the *Kyoto Protocol*, there are three important limitations to the operations of this Compliance Committee. First, the Compliance Committee can only raise questions about implementation with countries that are parties to the *Kyoto Protocol*; states that refuse to ratify the *Kyoto Protocol* are not subject to the compliance procedures. As climate change affects the whole planet, effective action to mitigate GHGs should be taken by all countries.<sup>55</sup>

Secondly, even if a state has agreed to be subject to the *Kyoto Protocol*, it may withdraw at a later date and so avoid the consequences of failing to comply with the commitments it has accepted. An example is the withdrawal by Canada from the *Kyoto Protocol*. In 2008, Canada had been subject to a question of implementation from the Compliance Committee concerning its national registry to track holdings of GHG credits because it was required to have a registry that met the appropriate technical standards.<sup>56</sup> The Compliance Committee decided not to proceed after the hearing, at which it was pointed out that Canada had later established a national registry that met the requirements of the Protocol.<sup>57</sup> However, in 2012 Canada decided to withdraw from the *Kyoto Protocol*,<sup>58</sup> and the consequence is that Canada does not have to meet targets to reduce GHGs.<sup>59</sup> This withdrawal will affect mitigation action by other countries, as overall mitigation targets may not be achieved. Unfortunately, this action undermines the ability of states to reach agreed targets and could delay mitigation action, which can seriously impact options to develop successful preventative action on climate change in the future.<sup>60</sup>

52 Loibl, above n 24, 436.

53 *COP Report 2005*, above n 19, art XI [I].

54 United Nations Framework Convention on Climate Change, *Compliance under the Kyoto Protocol* <[http://unfccc.int/kyoto\\_protocol/compliance/items/2875.php](http://unfccc.int/kyoto_protocol/compliance/items/2875.php)> Greece, Canada, Croatia, Bulgaria, Romania, Ukraine, Lithuania and Slovakia.

55 *WGIII Summary for Policy Makers* above n 21, 5 ‘Effective mitigation will not be achieved if individual agents advance their own interests independently. Climate change has the characteristics of a collective action problem at the global scale, because most greenhouse gases (GHGs) accumulate over time and mix globally, and emissions by any agent (e. g., individual, community, company, country) affect other agents’ <[http://report.mitigation2014.org/spm/ipcc\\_wg3\\_ar5\\_summary-for-policymakers\\_approved.pdf](http://report.mitigation2014.org/spm/ipcc_wg3_ar5_summary-for-policymakers_approved.pdf)>.

56 Informal information note by the secretariat, *The Compliance Procedure with respect to Canada* <[http://unfccc.int/files/kyoto\\_protocol/compliance/application/pdf/informal\\_information\\_note\\_by\\_the\\_secretariat\\_on\\_the\\_comp\\_proc\\_wrt\\_canada.pdf](http://unfccc.int/files/kyoto_protocol/compliance/application/pdf/informal_information_note_by_the_secretariat_on_the_comp_proc_wrt_canada.pdf)>.

57 Enforcement Branch of the Compliance Committee, Decision Not to Proceed Further CC-2008-1-6/Canada/EB 15 June 2008, [18] <[http://unfccc.int/files/kyoto\\_protocol/compliance/enforcement\\_branch/application/pdf/cc-2008-1-6\\_canada\\_eb\\_decision\\_not\\_to\\_proceed\\_further.pdf](http://unfccc.int/files/kyoto_protocol/compliance/enforcement_branch/application/pdf/cc-2008-1-6_canada_eb_decision_not_to_proceed_further.pdf)>.

58 United Nations Framework Convention on Climate Change *Status of Ratification of the Kyoto Protocol* <[http://unfccc.int/kyoto\\_protocol/background/items/6603.php](http://unfccc.int/kyoto_protocol/background/items/6603.php)> ‘In accordance with article 27 (1) of the *Kyoto Protocol* to the United Nations Framework Convention on Climate Change, the Government of Canada notified the Secretary-General of the United Nations that it had decided to withdraw from the *Kyoto Protocol*. The action will become effective for Canada on 15 December 2012 in accordance with article 27 (2).’

59 Compliance Committee CC/EB/24/2014/2 7 April 2014 10. ‘The branch requested the secretariat to prepare a background paper on Canada’s withdrawal from the *Kyoto Protocol* and its effects on Canada’s reporting obligations under the *Kyoto Protocol*. It agreed to consider this matter at its next meeting, with a view to determining whether it would bring the matter to the attention of the plenary.’

60 See *WGII Summary for Policy Makers* above n 1, 28. ‘Prospects for climate-resilient pathways for sustainable development are related fundamentally to what the world accomplishes with climate-change mitigation (*high confidence*). Since mitigation reduces the rate as well as the magnitude of warming, it also increases the time available for adaptation to a particular level of climate change, potentially by several decades. Delaying mitigation actions may reduce options for climate-resilient pathways in the future.’

Thirdly, the compliance procedures do not empower the Compliance Committee to conduct investigations into claims for compensation for those countries (with low GHG emissions) that suffer adverse impacts as a result of climate change.<sup>61</sup> States choosing to take legal action may seek to rely upon the law of state responsibility. However, as is discussed in the next section, there are limitations to these actions.

### III LAW OF STATE RESPONSIBILITY

The relationship between compliance procedures and treaty obligations is often not clear. Gerhard Loibl discusses two problems. First, compliance procedures may ‘soften’ legal obligations of parties to comply with their commitments under treaty.<sup>62</sup> The issue is whether environmental treaty obligations may be undermined by compliance procedures. According to Gerhard Loibl, compliance procedures are adopted to promote compliance with environmental commitments and to make sure that parties are able to meet their commitments in the future.<sup>63</sup> Generally, compliance procedures do not specifically deal with past violations of legal obligations under treaty and can be considered separately.

Secondly, the law of state responsibility as set out in the International Law Commissions ‘Responsibility for States of Internationally Wrongful Acts 2001’ indicates that states have an obligation to make reparation if they commit an internationally wrongful action.<sup>64</sup> Gerhard Loibl points out that as compliance procedures do not deal with the implications of past conduct, they do not generally impact on the law of state responsibility.<sup>65</sup> However, as the Enforcement Branch of the Compliance Committee under the *Kyoto Protocol* deals with the implications of Annex I parties that fail to meet their obligations, this branch is concerned with the consequences of past conduct. So, if the party has to make up 1.3 tonnes in the second commitment period, this could be seen as a compensation for the earlier breach.<sup>66</sup> A similar problem occurs when countermeasures are taken by the Compliance Committee if a state is excluded from the flexibility mechanisms under the *Kyoto Protocol* until the state is in compliance.<sup>67</sup> Gerhard Loibl considers that discussion about the relationship between these consequences and the law of state responsibility should take place<sup>68</sup> to clarify the legal position.

The application of state responsibility in the context of climate change continues to be uncertain. A responsible state can be viewed as owing obligations to the international community, but there are difficulties establishing a breach of obligations and proving that a particular state has caused damage to the atmosphere.<sup>69</sup> David Ong indicates that the issue has not been tested due to the difficulties of determining the legal liability for the damaging impacts of climate change.<sup>70</sup> There are also a number of complexities such as the problem of how to prove that the GHGs that cause the damage to a low-lying state have been emitted from a particular state or states.<sup>71</sup> The relationship between the compliance system and the law of state responsibility should be explained.<sup>72</sup> Even when clarified, the law of state responsibility may not be very

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61 Timo Koivurova, ‘International Legal Avenues to Address the Plight of Victims of Climate Change Problems and Prospects’ 22 (2) *Journal of Environmental Law and Litigation* 267, 277.

62 Loibl, above n 24, 437.

63 Ibid.

64 International Law Commission ‘Responsibility for States of Internationally Wrongful Acts 2001’ (United Nations 2005) art 31 <[http://legal.un.org/ilc/texts/instruments/english/draft%20articles/9\\_6\\_2001.pdf](http://legal.un.org/ilc/texts/instruments/english/draft%20articles/9_6_2001.pdf)>.

65 Loibl, above n 24, 437.

66 Ibid 438.

67 *Kyoto Protocol* arts 6 (Joint Implementation), 12 (Clean Development Mechanism), 17 (Emissions Trading).

68 Loibl, above n 24, 438.

69 International Law Commission above n 64, art 33. ‘The obligations of the responsible State set out in this part may be owed to another State, to several States, or to the international community as a whole, depending in particular on the character and content of the international obligation and on the circumstances of the breach.’

70 David Ong, ‘International Legal Efforts to Address Human-induced Global Climate Change’ in Malgosia Fitzmaurice, David Ong and Panos Merkouris, (eds), *Research Handbook on International Environmental Law* (Edward Elgar, 2010) 450, 451.

71 Ibid 453.

72 Loibl, above n 24, 438.

helpful when dealing with complex environmental problems like climate change. In fact, the issue of state responsibility and liability for environmental damage as a result of climate change is one of the greatest impediments to moving forward on climate change negotiations.<sup>73</sup>

Gerhard Loibl considers that the traditional dispute resolution process has a different focus from compliance procedures.<sup>74</sup> These dispute resolution approaches developed at international law in order to deal with the situation where damage had been caused to one state as a result of the actions of another state.<sup>75</sup> Clearly, the dispute resolution approach based upon state responsibility would not be able to protect the environment from irreversible damage caused by climate change damage<sup>76</sup> (such as extinction of species or inundation by sea water of low-lying coastal regions and islands). Tanzi and Pitea argue that the outcomes from compliance procedures are different from those of traditional dispute resolution at international law.<sup>77</sup> The compliance institution representing the common interests of states can facilitate or enforce regulatory actions within the regime provided for under the convention.<sup>78</sup> So, a compliance regime lacks the bilateral structure of traditional dispute resolution.<sup>79</sup>

In any event, taking action before the International Court of Justice may not be available if states that are high emitters of GHGs have not accepted the jurisdiction of this court. If judicial proceedings are brought, the focus is on whether the past actions were in breach of the convention or protocol and whether any remedy is available.<sup>80</sup> The development of compliance procedures is more appropriate, because these procedures adopt a preventative approach to dealing with the threat of climate change.

The focus should be on prevention<sup>81</sup> rather than seeking compensation after the damage to the environment has occurred, because the damage may be irreversible after climate change impacts occur. The impacts of climate change are likely to result in increased storms and extreme weather,<sup>82</sup> inundation of low-lying areas due to sea level rise,<sup>83</sup> changes to habitats and species extinction.<sup>84</sup> The consequences for humans are also severe; there are likely to be large numbers of displaced people,<sup>85</sup> loss of life, impacts on human health,<sup>86</sup> less access to food,<sup>87</sup> and changes to economic activities.<sup>88</sup> So the anticipatory approach in the *UNFCCC* and the *Kyoto Protocol* is preferable, because the focus is on preventative action through the adoption of the precautionary principle.<sup>89</sup> The *UNFCCC* sets out the preventative action that states can take to mitigate GHG emissions and promotes adaptation action.<sup>90</sup> However, the problem of addressing the threat of climate change is a complex one, requiring states to introduce effective regulation for private actors across a range of economic activities to promote mitigation of GHGs.<sup>91</sup>

It would also be difficult to determine the responsibility of any one state for the specific amount of damage that they themselves have contributed to climate change.<sup>92</sup> In view of the

73 Ong, above n 70, 453.

74 Loibl, above n 24, 439. See Jutta Brunnée, 'Promoting Compliance with Multilateral Environmental Agreements' in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 38, 39.

75 Ong, above n 70, 453.

76 Michael Mehling, 'Enforcing Compliance in an Evolving Climate Regime' in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 194, 210.

77 Tanzi and Pitea, above n 32, 579.

78 Ibid.

79 Ibid.

80 Loibl, above n 24, 439.

81 Ong, above n 70, 454.

82 *WGII Summary for Policy Makers*, above n 1, 6.

83 Ibid 17.

84 Ibid 4.

85 Ibid 19.

86 Ibid.

87 Ibid 13.

88 Ibid 20.

89 *UNFCCC* art 3(3); Ong, above n 70, 451.

90 *UNFCCC* arts 4, 10.

91 Brunnée, above n 74, 48.

92 See Ong, above n 70, 454.



complexities associated with attributing responsibility to a specific state (or states) for causing damage due to their failure to mitigate GHG emissions, climate change treaty negotiations could consider a new approach to state responsibility through obligations to provide compensation for damage (if damage is inevitable) as a result of the impacts of climate change. State responsibilities to the international community are also evident from the application of the concepts of international environmental law. The common concern of humankind and the related concepts of intragenerational equity and intergenerational equity showing that states have a responsibility to protect the interests of present and future generations are discussed in the following sections. As a result of the recognition of these state responsibilities, new proposals for legal frameworks are emerging to assist states to manage the threat of climate change.

#### IV COMMON CONCERN OF HUMANKIND

The ‘change in the Earth’s climate and its adverse effects are a common concern of humankind.’<sup>93</sup> The common concern of humankind dictates that states have a responsibility to deal with global environmental problems such as climate change and that the obligations for states to take action to address climate change set out in the *UNFCCC* and the *Kyoto Protocol* are for the benefit of the international community.<sup>94</sup> Jutta Brunnée points out that treaty regimes permit the development of new rules for the protection of the common concern.<sup>95</sup> The focus of collective concern is on treaty making rather than customary law, particularly in the area of climate change.<sup>96</sup> The collective concern applies to the rules developed for compliance in multilateral environmental conventions, and these rules emerged because the dispute resolution processes are not suitable for gaining effective compliance.<sup>97</sup> Indeed, the effectiveness of the compliance mechanisms rests upon the capacity of these mechanisms to serve the common concern of the parties and the obligations they have agreed to in the *UNFCCC*.<sup>98</sup>

Provisions in international environmental conventions, the *UNFCCC* and *United Nations Convention on Biological Diversity*<sup>99</sup> (*Biological Diversity Convention*) indicate changes to the traditional concept of sovereignty and a movement towards state cooperation to find solutions to these global environmental problems. The traditional concept of ‘sovereignty’ over land territory enables states to control the activities and natural resources within their territorial jurisdiction.<sup>100</sup> The *Biological Diversity Convention* applies to activities within state jurisdiction concerning conservation and sustainable use and so, restricts the application of state sovereignty.<sup>101</sup> Similarly, the responsibilities of states to the international community are set out in the *UNFCCC*, concerning state obligations to address mitigation of GHGs and adaptation to climate change and these provisions place restrictions on the way the sovereignty of states is exercised.<sup>102</sup>

93 *UNFCCC* preamble.

94 Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment* (Oxford University Press, 3rd ed, 2009) 130; Loibl, above n 24, 438.

95 Brunnée, above n 42, 572. ‘Of course, it is an open question whether effective protection of collective interests could be mounted on the basis of customary environmental law and the rules of state responsibility, especially since the latter are so rarely invoked. It is all the more important, then, that treaty regimes provide practical options for the protection of common interests. It is also safe to predict that they will remain the primary venues for ‘collective concern’ law making ... But treaty regimes have at least the potential to turn pragmatic cooperation into genuine normative communities. While by no means perfect, treaty regimes therefore offer promising settings in which to mediate between ‘individual state interest’ and ‘the global concerns of humanity as a whole.’

96 *Ibid.*

97 Tanzi and Pitea, above n 32, 571.

98 *Ibid.* 572.

99 *United Nations Convention on Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993) preamble.

100 See Birnie, Boyle and Redgwell, above n 94, 190.

101 *Ibid.* 621.

102 *Ibid.* 130.

Another approach to managing the adverse impacts of climate change is to focus on the implications of developing principles of international environmental law that are related to the common concern of humankind. The temporal aspect of the common concern of humankind takes into account the implications of environmental problems that will affect the interests of present and future generations.<sup>103</sup> The temporal dimension is reflected in the concepts of intragenerational equity, common but differentiated responsibility, and intergenerational equity. These are discussed in the following sections. The application of these concepts by the parties to the *UNFCCC* has the potential to influence the outcomes of negotiations about the future climate change compliance system.

## V INTRAGENERATIONAL EQUITY

The impacts of climate change are affecting present generations and are likely to affect the lives of future generations.<sup>104</sup> The provisions in the *UNFCCC* include the principles of intragenerational equity<sup>105</sup> and intergenerational equity<sup>106</sup> to guide the parties when they are seeking to achieve the objective of this convention. ‘Intragenerational equity’ concerns equity issues occurring within a generation and relates to the concept of ‘equitable sharing of burdens.’ This concept essentially raises the question of how each country shall contribute to the achievement of the protection of the environment.<sup>107</sup> In the context of climate change, the application of the sharing of burdens or ‘common but differentiated responsibilities’<sup>108</sup> anticipates that some states will need to contribute more than others<sup>109</sup> and that developed countries will have to provide leadership when addressing the adverse effects of climate change.<sup>110</sup>

A clear distinction has been drawn under the *Kyoto Protocol* between the obligations for developed and developing countries. The mitigation obligations for developed countries (included in Annex I to *UNFCCC*) are monitored. The role of the Enforcement Branch is to ensure the targets for GHG reduction are met by developed countries. The Facilitative Branch applies both to developed and to developing countries, and it can provide financial or technical assistance to developing countries, taking into account the common but differentiated responsibilities concept<sup>111</sup> and the particular circumstances of the issue.<sup>112</sup> Indeed, the common but differentiated responsibilities and respective capabilities concept can be considered as part of the approach by the Facilitative Branch; for example, in a particular case it may be possible to take into account the lack of capacity of a developing country to implement mitigation

103 ‘Note from the UNEP Secretariat to the Meeting’ in David Attard (ed), *The Meeting of the Group of Legal Experts to Examine the Concept of the Common Concern of Mankind in Relation to Global Environmental Issues* (UNEP, 1991) 37.

104 Report of the Secretary-General, *Recent Proposals in Intergenerational Solidarity and the Needs of Future Generations*, UNGAOR, 68th sess, Agenda Item 19, UN Doc A/68/x, 5 August 2013 (*Recent Proposals in Intergenerational Solidarity*) [14]. ‘In the case of some global environmental problems, the consequences of our present actions would not appear before decades, if not hundreds of years. For instance, certain very high risk impacts of climate change would not likely fall on our children or grandchildren; they would impact people born perhaps five or ten or twenty generations hence.’

105 *UNFCCC* art 3(1).

106 *UNFCCC* art 3(1).

107 See *Declaration of the United Nations Conference on Environment and Development* (14 June 1992) UN Doc A/CON F.151/26 (Volume 1), 31 ILM 874 (*Rio Declaration*) Principle 7. *UNFCCC* preamble.

108 *UNFCCC* art 3(1).

109 *United Nations Convention on Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993) preamble.

110 *UNFCCC* art 3(1).

111 Lavanya Rajamani, ‘Developing Countries and Compliance in the Climate Regime’ in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 367, 391.

112 Sabrina Urbinati, ‘Procedures and Mechanisms Relating to Compliance under the 1997 Kyoto Protocol to the 1992 United Nations Framework Convention on Climate Change’ in Tullio Treves et al (eds), *Non-Compliance Procedures and Mechanisms and The Effectiveness of International Environmental Agreements* (T M C Asser Press, 2009) 63,71.

measures.<sup>113</sup> The operation of the common but differentiated responsibilities concept and the degree to which assistance is provided to developing countries could influence the negotiations to develop an improved compliance regime on climate change during 2015.<sup>114</sup>

## VI COMMON BUT DIFFERENTIATED RESPONSIBILITIES

### *A Implications of Common but Differentiated Responsibilities in the UNFCCC*

There continues to be some disagreement among parties to the *UNFCCC* about the meaning of the concept of ‘common but differentiated responsibilities’, and this disagreement has consequences for the compliance regime under *UNFCCC*,<sup>115</sup> as the participation of developing parties in the convention depends upon the fulfilment of responsibilities by developed parties to the *UNFCCC*. According to the *UNFCCC*, all parties, taking into account their common but differentiated responsibilities, shall publish national inventories of GHG emissions.<sup>116</sup> This information is to be communicated to the COP including the measures taken to carry out the obligations in the *UNFCCC* and other relevant information for calculating GHG emission trends.<sup>117</sup> As there are differing interpretations of the term ‘common but differentiated responsibilities’, and the meaning of this concept is not clearly set out in the *UNFCCC*, it is difficult to determine the extent that developing country compliance can be enabled through financial and technical assistance.<sup>118</sup>

Developing country parties can be encouraged to comply with GHG mitigation actions through the provision of assistance from developed countries in accordance with the application of the common but differentiated responsibilities concept. The degree to which developing countries will meet their obligations under the *UNFCCC* depends upon developed countries implementing their commitments to provide financial assistance and transfer of technology.<sup>119</sup> In addition, there is recognition in the *UNFCCC* that social and economic development and elimination of poverty are of primary importance to these countries.<sup>120</sup> Governments of developing countries may have difficulty meeting their development priorities, and so require financial and technical assistance to manage their information reporting requirements to the COP. However, it is unlikely that the articles concerning assistance for developing countries in the *UNFCCC*<sup>121</sup> could be used as compliance provisions because these provisions are worded generally in discretionary terms that are not amenable to compliance assessment.<sup>122</sup>

The Cancun Agreements increase the reporting requirements for developing country parties.<sup>123</sup> Non-Annex I parties are to submit national reports to the Conference of the Parties, generally, every four years as well as biennial updated reports.<sup>124</sup> The Subsidiary Body for

113 Jane Bulmer, ‘Compliance Regimes in Multilateral Environmental Agreements’ in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 55, 61.

114 *Ibid* 62.

115 Brunnée, above n 74, 49.

116 *UNFCCC* art 4(1).

117 *UNFCCC* art 12(1).

118 Brunnée, above n 74, 49.

119 *UNFCCC* art 4(7) ‘The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.’

120 *Ibid*.

121 *UNFCCC* arts 4(3), 4(4), 4(5).

122 Rajamani, above n 111, 393.

123 *UNFCCC*, Conference of the Parties, *Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010 Addendum Part Two: Action taken by the Conference of the Parties at its sixteenth session FCCC/CP/2010/7/Add.1 16th sess (15 March 2001)*.

124 *Ibid* [60](b)(c).

Implementation will conduct ‘international consultation and analysis’ of these biennial reports<sup>125</sup> in conjunction with expert review teams to increase transparency of actions taken to mitigate GHGs.<sup>126</sup> International and domestic mitigation actions will be assessed and confirmed.<sup>127</sup> The final result of this information gathering will be a summary report.<sup>128</sup> This process of international consultation and analysis could be intended to be a compliance procedure for the next climate change international agreement.<sup>129</sup> One commentator, Lavanya Rajamani, raises the possibility that the summary report may not only be prepared to provide information but could also be used to place pressure on countries to adhere to mitigation actions through, possibly, the use of trade sanctions.<sup>130</sup>

The incorporation of comprehensive information collecting and reporting requirements by parties also improves the capacity for compliance with multilateral environmental agreements. Jutta Brunnée points out that these reporting requirements assist states to understand the extent of the environmental threat and how joint action can help to alleviate the threat, leading states to acknowledge that cooperative action and compliance leads to beneficial outcomes for all.<sup>131</sup> So, the improved reporting requirements set out in the Cancun Agreements can help to develop a culture of compliance, however, the undertaking of obligations on the part of developing country parties to the *UNFCCC* to provide information ultimately depends upon the fulfilment of commitments by the developed country parties to provide assistance.<sup>132</sup>

There is evidence to show that developed countries are providing more assistance to developing countries: in addition to the Global Environment Facility and existing arrangements, three new institutions have been established to provide financial and technological assistance to developing countries. These three new institutions, established by the COP, are the Warsaw International Mechanism for Loss and Damage (Warsaw International Mechanism), the Green Climate Fund, and the Technology Mechanism and are discussed in the following sections.

### B *The Warsaw International Mechanism*

The Warsaw International Mechanism will organise approaches to address losses resulting from the impacts of climate change in developing countries which are vulnerable to these impacts.<sup>133</sup> The three functions of the Mechanism are:

- Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts ...<sup>134</sup>
- Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders ...<sup>135</sup>
- Enhancing action and support, including finance, technology and capacity-building, to address loss and damage associated with the adverse effects of climate change ...<sup>136</sup>

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125 Ibid [63].

126 Ibid.

127 Ibid [61],[62].

128 Ibid.

129 Rajamani, above n 111, 382.

130 Ibid.

131 Brunnée, above n 74, 45.

132 Rajamani, above n 111, 386.

133 *UNFCCC*, Conference of the Parties, *Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013 Addendum Part two: Action taken by the Conference of the Parties at its nineteenth session FCCC/CP/2013/10/Add.1 19th sess 6* (‘*COP Report 2013*’).

134 Ibid 6 [5a].

135 Ibid 7 [5b].

136 Ibid 7 [5c].

### C *The Green Climate Fund*

The Green Climate Fund has been established to assist developing countries to reduce their GHG emissions and to adapt to the impacts of climate change.<sup>137</sup> The funds will be divided between mitigation and adaptation activities.<sup>138</sup> The interests of developing countries that are particularly vulnerable to the impacts of climate change will be taken into account when the funds are distributed.<sup>139</sup>

The other issue that is being addressed at the international level is the necessity to raise large amounts of money to finance these and other initiatives. The proposal is that developed countries will raise long-term climate finance of US \$100 billion per year by 2020.<sup>140</sup> These funds will assist the implementation of financing and transfer of technology commitments under the *UNFCCC*.<sup>141</sup> The funding will also provide clear financial support to developing countries to improve their implementation of the *UNFCCC*.<sup>142</sup> There may be implications for compliance if this funding is not adequately addressed, and it is possible that some enforcement of financial obligations could be considered as part of a new or improved climate change compliance regime.<sup>143</sup>

### D *The Technology Mechanism*

In order to overcome some of the problems about the implementation of technology transfer, the Technology Mechanism has been established with a view to increasing the rate of technology transfer to developing countries. This mechanism is comprised of two bodies, the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN).<sup>144</sup> The aim of the CTCN is to give practical assistance to support developing countries, at their request, by providing technological assistance and facilitating technology projects for mitigation and adaptation and by encouraging the adoption of low emission and climate resilient strategies.<sup>145</sup>

These initiatives are positive steps towards providing more effective assistance to developing countries but given the large numbers of people likely to become displaced by the impacts of climate change and the potential for irreversible damage to the environment, more detailed legal proposals will need to be introduced in the future. The following section discusses whether the interests of future generations can be addressed through legal mechanisms because members of these generations are likely to be seriously impacted as a result of the adverse effects of climate change.<sup>146</sup>

## VII INTERGENERATIONAL EQUITY

‘Intergenerational equity’ can be understood as safeguarding the interests of future generations to ensure that they will receive a similar quality of life to that of the present generation and if possible, a better one.<sup>147</sup> During the last two decades there have been many examples of attempts to include intergenerational equity in laws and policies including at national and international levels.<sup>148</sup> It is also possible that the rights of the elements of the environment

137 *UNFCCC* ‘Green Climate Fund’ <<http://www.gcfund.org/about-the-fund/mandate-and-governance.html>>.

138 COP Report 2013, ‘A. Initial Guidance to the Green Climate Fund’ above n 133, 11 [9].

139 *Ibid*.

140 COP Report 2013, ‘Long-term Climate Finance’ above n 133, 9 [7].

141 *Ibid* 9 [2].

142 *Ibid* 9 [4].

143 Bulmer, above n 113, 62.

144 *UNFCCC*, Subsidiary Body for Scientific and Technological Advice and Subsidiary Body for Implementation Thirty-ninth Session Warsaw 11–16 November 2013 *Joint annual report of the Technology Executive Committee and the Climate Technology Centre and Network for 2013* FCCC/SB/2013/1 39th sess (26 September 2013) [6].

145 *Ibid* [8].

146 See Edith Brown Weiss, ‘Implementing Intergenerational Equity’ in Malgosia Fitzmaurice, David Ong and Panos Merkouris (eds), *Research Handbook on International Environmental Law* (Edward Elgar, 2010) 100, 113.

147 See *Rio Declaration*, above n 107, Principle 3.

148 Brown Weiss, above n 146, 108.



could be safeguarded by guardians.<sup>149</sup> The Report of the Secretary-General ‘Intergenerational Solidarity and the Needs of Future Generations’ (Report of the Secretary-General) considered that a High Commissioner could represent future generations at the international level, or a special envoy could carry out this role.<sup>150</sup> Other options proposed in this report included that the high-level political forum could address the interests of future generations as a recurring agenda item (within the sustainable development framework), or that the Secretary-General could endorse the interests of future generations within the UN institutional system.<sup>151</sup> These proposals indicate attempts to introduce a legal framework to support the interests of future generations at international law.

One means of extending the principles of intergenerational equity and intragenerational equity further (in the context of climate change) is to consider an innovative approach to state responsibility in the context of the global environmental problem of climate change. More research could be carried out in this area.<sup>152</sup> An effective regime for damage and loss caused by climate change should be established<sup>153</sup> to provide justice for present and future generations. It may be preferable to consider state reparation in a new way where states with high GHG emissions are responsible for providing compensation to low-emitting countries that suffer damage as a result of the impacts of climate change. If high GHG-emitting states can be deemed responsible, perhaps some aid and compensation could be considered as due reparation to other low-emitting states that are adversely affected by the impacts of climate change without any need to prove that the high-emitting states are at fault. In effect, this system could be a method of no fault compensation. This type of approach may be particularly useful to assist the present and future generations of people who will become displaced as a result of the impacts of climate change, as some climate change warming is inevitable, and a system of reparation would draw attention to the social injustice of their plight. If a more comprehensive regime for compensation is established, it could also encourage states to adhere to their mitigation commitments because of their responsibilities to the international community. Alternatively, a financial penalty could be imposed on countries that failed to adhere to their mitigation obligations. This penalty could be particularly appropriate for repeat offences. These fines could be placed in a fund that could assist mitigation and adaptation assistance for developing countries.<sup>154</sup> The following section discusses some of the other potential reforms that could be introduced to protect the interests of present and future generations.

## VIII POSSIBLE DEVELOPMENTS IN THE FUTURE

First, this section discusses two possible developments that could improve compliance through the expansion of existing processes available in the provisions the *UNFCCC* that have not yet been fully utilised by the parties to the *UNFCCC*. Lavanya Rajamani proposes that the development of a multilateral consultative process<sup>155</sup> could promote compliance — or, alternatively, the review and assessment provisions in the *UNFCCC*<sup>156</sup> could be expanded upon to encourage more effective compliance by all states. Secondly, this section considers four possible options for reform that could help to protect the interests of present and future generations from the adverse impacts of climate change.

149 Christopher Stone, ‘Safeguarding Future Generations’ in Emmanuel Agius et al, *Future Generations and International Law* (Earthscan, 1998) 65, 66. ‘One might consider (as I have proposed) a group of guardians, one for each of several natural objects — for example, a legal spokesperson for marine mammals, another for Antarctic fauna, perhaps others for various cultural artefacts such as the Sphinx.’

150 *Recent Proposals in Intergenerational Solidarity*, above n 104, [63], [65].

151 *Ibid* [66], [67].

152 Brown Weiss, above n 146, 114. ‘The practical implications of measures to implement intergenerational equity are important topics for analysis and research. How do we reach consensus on the essential interests of future generations? How can we translate the principle of intergenerational equity into legal rights and obligations and develop effective measures to carry them out?’

153 Philippe Culle, ‘Liability and Redress for Human-Induced Global Warming: Towards an International Regime’ (2007) 26 *Stanford Environmental Law Journal* 99,115.

154 Doelle, Brunnée and Rajamani, above n 46, 442.

155 Rajamani, above n 111, 387.

156 *Ibid* 386.

### *A Multilateral Consultative Process*

The provisions of the *UNFCCC* allow for the development of a multilateral consultative process that could promote compliance.<sup>157</sup> This process could assist with developing country party compliance, as the Enforcement Branch is primarily concerned with developed country compliance with agreed targets set out in the provisions of the *Kyoto Protocol*.<sup>158</sup> It is likely that the ongoing negotiations for a new international agreement will focus on increasing reporting requirements by all parties to the *UNFCCC* as well as the adoption of new targets by developed states and mitigation actions by developing states.<sup>159</sup> If this is the likely course of the new agreement, a multilateral consultative process could facilitate compliance outcomes based upon states achieving outcomes, rather than relying on the approach of the Enforcement Branch to determine consequences for states.<sup>160</sup> However, a facilitative process may not lead to the results necessary to mitigate GHGs on a global basis, particularly if there are no consequences for states if they fail to meet their mitigation objectives.

### *B Review and Assessment Provisions*

It may be possible to use the existing provisions in the *UNFCCC* for review and assessment to provide an accurate overview of compliance with the provisions in the *UNFCCC* in a more effective manner than at present.<sup>161</sup> The COP regularly reviews the implementation of the *UNFCCC* and examines the obligations of the parties to the convention.<sup>162</sup> The Subsidiary Body for Implementation (SBI) considers the information communicated by the parties in their national reports to the COP (concerning the inventory of emissions and implementation actions in compliance with the provisions in the *UNFCCC*)<sup>163</sup> to help the COP carry out the review of implementation of the convention.<sup>164</sup> Further, (as noted earlier) the Cancun Agreements have increased the requirements for states to provide information.<sup>165</sup> So, the SBI has additional responsibilities including the consideration of the national communications and updates from developing countries as well as the conduct of the international consultation and analysis procedures that should lead to a complete overview of compliance.<sup>166</sup> At present, these functions do not permit requests for an increase in the obligations of parties to the *UNFCCC* or for the enhancement of compliance for developing countries.<sup>167</sup> However, it may be possible to expand these procedures to improve compliance in the future by permitting these adjustments.

### *C General Comments*

There continues to be some uncertainty about whether the Compliance Committee and the two branches, Enforcement and Facilitative, will continue to carry out their roles after the time period for the *Kyoto Protocol* has expired. If the Compliance Committee ceases to carry out its functions and there is no similar replacement, the compliance system for GHG mitigation would be ineffectual.<sup>168</sup> The two abovementioned suggestions, the multilateral consultative process and review and assessment are based upon increasing reliance on provisions in the

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<sup>157</sup> *UNFCCC* art 13 ‘The Conference of the Parties shall, at its first session, consider the establishment of a multilateral consultative process, available to Parties on their request, for the resolution of questions regarding the implementation of the Convention.’

<sup>158</sup> *Kyoto Protocol* Annex B. See Rajamani, above n 111, 388.

<sup>159</sup> Rajamani, above n 111, 388.

<sup>160</sup> *Ibid* 388.

<sup>161</sup> *Ibid* 386.

<sup>162</sup> *UNFCCC* art 7(2).

<sup>163</sup> See *UNFCCC* arts 10(2) and 12.

<sup>164</sup> *UNFCCC* art 10(1)

<sup>165</sup> *UNFCCC, Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010 Addendum Part Two: Action taken by the Conference of the Parties at its sixteenth session FCCC/CP/2010/7/Add.1* 16th sess, (15 March 2001).

<sup>166</sup> See Rajamani, above n 111, 387.

<sup>167</sup> *Ibid* 387.

<sup>168</sup> See Brunnée, above n 74, 53.

*UNFCCC* and may not be as effective as the Compliance Committee because there are no consequences for states that fail to adhere to their obligations. So, future mechanisms could be developed to enhance compliance for developed and developing countries and this issue should be addressed in the next international agreement.

Generally, the results of the practice of the Enforcement Branch have been constructive because that branch can impose sanctions, unlike other compliance systems in environmental treaties.<sup>169</sup> Clearly, the Compliance Committee has had a degree of success at resolving non-compliance,<sup>170</sup> apart from the problem of the withdrawal of ratification from the *Kyoto Protocol* by Canada.<sup>171</sup> So, it would be preferable to continue with a similar strengthened system when the next international agreement is negotiated. A measurement, reporting and verification system is stronger if it has legal consequences for non-compliance.<sup>172</sup> Discussions at the international level about compliance indicate that parties are likely to negotiate a new compliance system and there is an expectation that the 2015 agreement will include ‘a robust compliance mechanism which includes appropriate consequences for non-compliance’<sup>173</sup> The problems for negotiators will be how to address new obligations for developed countries to provide financial and technical assistance and the inclusion of developing country responsibilities.<sup>174</sup> The issues facing negotiators will also involve questions about the application of the common but differentiated responsibilities concept, who will be able to trigger the compliance proceedings; how to verify and enforce compliance; what are appropriate consequences for non-compliance; and how to build an effective compliance regime.<sup>175</sup>

The effectiveness of the compliance system in the *Kyoto Protocol* depends upon cooperation from the party (that is having difficulty complying) to contribute positively in procedures to remedy the situation.<sup>176</sup> In any event, the difficulty that occurs when a party withdraws from its international obligations in the *Kyoto Protocol* and takes advantage of the actions of other states reducing their GHG emissions could be addressed by limiting the ability of states to withdraw from the next international agreement.

The problem with a state advancing its own interests and deliberately avoiding its international obligations to reduce GHG emissions is that this undermines global efforts to achieve effective mitigation of GHGs.<sup>177</sup> The common concern of humankind concept indicates that all states should cooperate to deal with the threat of climate change so, the focus should be on incentives for states to participate in the next international agreements on climate change.<sup>178</sup> One example is making the future ability of states to participate in an emissions trading scheme (that would operate at the international level) conditional upon the states ratifying the next

169 Mehling, above n 76, 204.

170 René Lefeber and Sebastian Oberthür, ‘Key Features of the *Kyoto Protocol*’s Compliance System’ in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 77, 98.

171 See *ibid* 99.

172 Meinhard Doelle, ‘Experience with the Facilitative and Enforcement Branches of the Kyoto Compliance System’ in Jutta Brunnée, Meinhard Doelle and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2012) 102, 146.

173 *UNFCCC Ad Hoc Working Group in the Durban Platform for Enhanced Action ADP.2012.6 Informal Summary of the roundtable under workstream 1 ADP 1, part 2 Doha, Qatar, November–December 2012* Note by the Co-Chairs (7 February 2013) [33].

174 Doelle, Brunnée and Rajamani, above n 46, 447–8.

175 *Ibid* 438.

176 Tanzi and Pitea, above n 32, 569–70.

177 IPCC, *WGIII Summary for Policy Makers*’ above n 21, 5 ‘Effective mitigation will not be achieved if individual agents advance their own interests independently. Climate change has the characteristics of a collective action problem at the global scale, because most greenhouse gases (GHGs) accumulate over time and mix globally, and emissions by any agent (e. g., individual, community, company, country) affect other agents. International cooperation is therefore required to effectively mitigate GHG emissions and address other climate change issues.’

178 Jacob Werksman and Kirk Herbertson, ‘The Aftermath of Copenhagen: Does International Law Have a Role to Play in the Global Response to Climate Change?’ (2010) *Maryland Journal of International Law* 109, 140 ‘There are indications that a post-2012 climate change regime will support performance-based financial mechanisms and carbon markets that could reward countries that are willing to make specific undertakings.’

international agreement. If some states refuse to ratify the next agreement and take action to mitigate GHGs, it may be possible, perhaps through a General Assembly resolution, for states to note that free rider states may be liable for additional compensation to those countries which are adversely impacted as a result of this failure to cooperate.

#### D *Other Options*

There are four possible future legal developments that could assist to protect the interests of present and future generations against the adverse impacts of climate change. These are the development of a global carbon tax, the establishment of a trust fund, insurance proposals, and the appointment of a representative for future generations at the international level.

First, a world-wide carbon tax such as a fee on coal and oil production could be developed. Unfortunately, this global carbon tax initiative has not received support from many countries. If agreed to, a global carbon tax would take a long time to negotiate and even more time for the revenues to be sent to the United Nations to distribute.<sup>179</sup>

Secondly, the establishment of a trust fund could compensate future generations that experience damage as a result of extreme events occurring due to the impacts of climate change. The trust fund is well suited to this arrangement because finances will need to be contributed from many different states, and this money may be spent in locations distant from the source of the funds and could be allocated for the benefit of generations who do not yet exist.<sup>180</sup> Edith Brown Weiss suggested that a trust fund could be financed by establishing a user's fee for activities which impose costs on future generations. In the context of climate change, this fee could be a tax on coal and oil use.<sup>181</sup> However, this collection of fees could pose similar problems to those raised about the global carbon tax suggestion.

Thirdly, parties to the *UNFCCC* are considering insurance options to assist developing country parties when they are affected by the adverse effects of climate change.<sup>182</sup> Some of the benefits of insurance are: it provides financing to enable recovery from risk events; the risk is spread; and incentives to reduce risk can be incorporated into the plan of insurance. The Munich Climate Insurance Initiative (MCII) has proposed submissions on how best to develop insurance assistance particularly for extreme weather events occurring as a result of climate change as insurance will not be suitable for slow onset impacts.<sup>183</sup> One of the proposals is that an international (or regional) convention could cover insurance for loss or damage as a result of the impacts of climate change.<sup>184</sup> The functions of a climate change insurance convention would include assessments of loss or damage for extreme weather events, provision of climate risk insurance (including finance mechanisms) as well as policy coherence and transfer of risk tools.<sup>185</sup>

Fourthly, the Report of the Secretary-General proposed the appointment of a High Commissioner for future generations and suggests that the following functions could apply to this position:

- The High Commissioner could act as an advocate for intergenerational solidarity through interactions with the Member States and other stakeholders as well as across the United Nations entities and specialized agencies.

179 Deborah Zaberenco, 'U.N. Climate Chief sceptical about global climate tax' Reuters 2007 <[http://unfccc.int/files/press/news\\_room/unfccc\\_in\\_the\\_press/application/pdf/ydb\\_20070802\\_reuters.pdf](http://unfccc.int/files/press/news_room/unfccc_in_the_press/application/pdf/ydb_20070802_reuters.pdf)>.

180 Phillipe Sands, 'Trusts for the Earth: New International Financial Mechanisms for Sustainable Development' in Winfried Lang et al (eds) *Sustainable Development and International Law* (Graham & Trotman, 1995) 167, 167.

181 Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity* (United Nations University, 1989) 154–5.

182 *UNFCCC* art 4(8).

183 Munich Climate Insurance Initiative, (MCII) *Insurance solutions in the context of climate change-related loss and damage: Needs, gaps, and roles of the Convention in addressing loss and damage* (October 2012) 8 <[http://unfccc.int/files/adaptation/cancun\\_adaptation\\_framework/loss\\_and\\_damage/application/pdf/mcii\\_submission\\_loss\\_and\\_damage\\_cop\\_18.pdf](http://unfccc.int/files/adaptation/cancun_adaptation_framework/loss_and_damage/application/pdf/mcii_submission_loss_and_damage_cop_18.pdf)>.

184 *Ibid* 22.

185 *Ibid* 23.

- Such an office could undertake research and foster expertise on policy practices to enhance intergenerational solidarity in the context of sustainable development on the international, regional and national and sub-national level and disseminate this expertise as deemed appropriate.
- The office could, on request from the United Nations or any of its entities, specialized agencies, or affiliated organizations, offer advice on implementation of existing intergovernmental commitments to enhance the rights and address the needs of future generations.
- The office could, upon request, also offer its support and advice, including to individual Member States on best practices and policy measures to enhance intergenerational solidarity.<sup>186</sup>

These four proposals demonstrate that lawyers are seeking to provide new legal frameworks to address complex problems associated with the threat of climate change. There are, however, some difficulties with these proposals. A global trust fund may assist future generations to have funds to remediate environmental damage, but there are limits to the advantages of a fund of money. If the temperature increases caused by climate change lead to a breach of environmental tipping points and irreversible environmental damage, remediation would not be possible, and the international focus should be on prevention of this damage from occurring in the first place. Edith Brown Weiss argues that the trust is an appropriate legal device to protect the environment for future generations where the trustee is the present generation which is also partly a beneficiary of the trust.<sup>187</sup> The common concern of humankind concept emphasises the responsibility of states to protect the atmosphere and is linked in the temporal dimension to the protection of the interests of future generations, so, this concept can be viewed as incorporating the mechanism of trust.<sup>188</sup> In the context of climate change, the trust could protect the atmosphere on behalf of present and future generations (the beneficiaries). Clearly, governments of states have duties to take international agreed action to protect the atmosphere from the threat of climate change for the benefit of future generations. Indeed, humankind has a responsibility to protect the environment for the future, and this is fundamental to sustainable development.<sup>189</sup> The application of the trust in this way adopts a precautionary and preventative approach to climate change protection.

In addition to the appointment of a High Commissioner for future generations, an independent representative could be appointed as a climate change commissioner to protect the interests of future generations from the adverse impacts of climate change. The office of a climate change commissioner for future generations could be established to deal specifically with the complex issues raised by climate change that will impact future generations.<sup>190</sup> The climate change commissioner could promote development of climate change adaptation and mitigation policy for the benefit of future generations and encourage action to be taken in accordance with these policies by governments as well as non-state actors including business and NGOs.<sup>191</sup> One of the best approaches would be to link the role of the climate change commissioner to a new compliance system where the climate change commissioner could require an investigation from an international climate change compliance institution into any failure by states to comply with mitigation, adaptation and reporting obligations. Alternatively, if the traditional method of international dispute resolution is relied upon in the future, the climate change commissioner could be granted legal standing to act on behalf of future generations to bring legal action in the International Court of Justice or in international environmental arbitration. Indeed, if a climate change commissioner could draw international attention to the serious impacts on

<sup>186</sup> *Recent Proposals in Intergenerational Solidarity*, above n 104, [63].

<sup>187</sup> See Edith Brown Weiss, 'The Planetary Trust: Conservation and Intergenerational Equity' (1984) 11 *Ecology Law Quarterly* 495, 507.

<sup>188</sup> Laura Horn, *The Common Concern of Humankind and Legal Protection of the Global Environment* (PhD Thesis, The University of Sydney, 2001) 134.

<sup>189</sup> Birnie, Boyle and Redgwell, above n 94, 121.

<sup>190</sup> Brown Weiss above n 146, 112.

<sup>191</sup> *Ibid.*



future generations as a result of the effects of climate change, states may be more likely to engage in joint action to prevent these adverse impacts and develop a culture of compliance.

The development of an appropriate insurance option at the international level has merit and could assist developing countries particularly those at risk of increased storm damage. Some small island developing nations are presently not able to obtain insurance because of increasing costs of premiums and the limited scope of these insurance policies.<sup>192</sup> However, the development of insurance is unlikely to assist with slow onset impacts of climate change such as the rise of sea levels and flooding of coastal areas. These are more serious concerns, as in the case of total inundation of small island communities, the questions remain about whether additional funding could possibly compensate for loss of sovereignty or loss of culture.<sup>193</sup> Possibly, other innovative approaches that protect cultural identity and maintain habitats could assist.

## IX CONCLUSION

The international legal system is not well suited to addressing global environmental problems, and the challenge for lawyers is how to provide legal regulatory frameworks at international law that can help to manage major threats such as climate change. Clearly, this challenge is being met by proposals for change and development of new institutions. Three legal mechanisms — Joint Implementation, the Clean Development Mechanism and emissions trading — are examples of legal frameworks that have been developed to assist states to deal with the threat of climate change. More recent advances are evident from the establishment of the Warsaw International Mechanism, the Green Climate Fund and the Technology Mechanism.

Given that some temperature rise (and the effects) will in any event occur, the development of new mechanisms can help to protect the interests of present future generations against the adverse consequences resulting from climate change. The proposals for a global tax (or a trust fund), an international convention on insurance and the appointment of an international representative to protect the interests of future generations could ameliorate some of these adverse consequences. These proposals can also assist negotiations among states to as they develop innovative legal frameworks and progress towards a new treaty on climate change (to be completed in 2015 and likely to be in force by 2020).<sup>194</sup> There is limited time for introduction of reforms before serious tipping points are reached and irreversible destruction occurs. Even though the international legal system is not suited to dealing with the complex environmental problems arising from the impacts of climate change, international lawyers are attempting to devise new solutions to help states cooperate to address the problem.

The authenticity and effectiveness of any compliance system adopted in the future will depend upon the ability of the system to meet the outcomes expected by states through the recognition that climate change and its adverse effects are the common concern of humankind. It may be necessary to consider innovative approaches such as the establishment of the office of climate change commissioner for future generations. Overall, much depends upon the ability of states to cooperate and develop an effective climate change compliance regime in the next international treaty. Indeed, the response to the threat of climate change requires committed action by states to reduce GHG emissions urgently and unfortunately, there is at present, no method of ensuring that all states will meet these commitments in the future.

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192 UNFCCC, Subsidiary Body for Implementation thirty-seventh session (26 November- 1 December 2012) *Report on the regional expert meetings on a range of approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events Note by the Secretariat* FCCC/SBI/2012/29 37th sess. (19 November 2012) [42]

193 *Ibid* [27].

194 *COP Report 2013*, above n 133, 4 [2]. ‘Decides, in the context of its determination to adopt a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties at its twenty-first session (December 2015) and for it to come into effect and be implemented from 2020.’

