

## 'No-harm rule' and climate change\*

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### 1. Introduction

In September 2011, the President of Palau made a statement to the UN General Assembly in which he asked the General Assembly to “seek, on an urgent basis... an advisory opinion from the International Court of Justice on the responsibilities of States under international law to ensure that activities carried out under their jurisdiction or control that emit greenhouse gases do not damage other States”.<sup>1</sup> While the question eventually submitted to the Court is still under negotiation, the ‘no-harm rule’ or ‘principle of prevention’ is, provided the initiative goes ahead, likely to form an integral part of the legal analysis.<sup>2</sup>

The no-harm rule is a widely recognised principle of customary international law whereby a State is duty-bound to prevent, reduce and control the risk of environmental harm to other states.<sup>3</sup> This paper provides a short analysis of the potential application of this obligation in the context of climate change. It will not explore other related legal issues such as the attribution of damages, the standard of proof or the relationship between the United Nations Framework Convention on Climate Change (UNFCCC) and other rules of public international law.

### 2. The obligation under international law

The legal precedent usually cited in connection with the no-harm rule concerns a Canadian smelter whose sulphur dioxide emissions had caused air pollution damage across the border in the United States.<sup>4</sup> The arbitral tribunal in that case determined that the government of Canada had to pay compensation for damage that the smelter had caused, primarily, to land along the Columbia River valley in the US. It found that “under the principles of international law, as well as of the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence”.<sup>5</sup>

Subsequently, the no-harm rule has been incorporated in various law and policy documents. Principle 21 of the 1972 Stockholm Declaration provides that: “States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit

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<sup>1</sup> UN Department of Public Information, press release “Advisory opinion on climate change”, 3 February 2012, at [http://www.un.org/News/briefings/docs/2012/120203\\_ICJ.doc.htm](http://www.un.org/News/briefings/docs/2012/120203_ICJ.doc.htm).

<sup>2</sup> The terminology varies and the concept is also described as ‘no-harm principle’ or with reference to transboundary pollution, harm and risk.

<sup>3</sup> Ian Brownlie, *Principles of Public International Law*, 7<sup>th</sup> ed., 2008, pp.275-285; Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment*, 3<sup>rd</sup> ed., Oxford 2009, pp.143-152.

<sup>4</sup> *Trail Smelter Arbitration, United States v Canada*, UN Reports of International Arbitral Awards (UNRIAA), 16 April 1938 and 11 March 1941, Vol. III, pp. 1905-1982, available at [http://untreaty.un.org/cod/riaa/cases/vol\\_III/1905-1982.pdf](http://untreaty.un.org/cod/riaa/cases/vol_III/1905-1982.pdf) or *American Journal of International Law*, Vol.33 (1939), p.182 & Vol.35 (1941), p.684.

<sup>5</sup> *Trail Smelter Arbitration*, UNRIAA, Vol. III, p.1965.

their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction".<sup>6</sup>

The 1992 Rio Declaration on Environment and Development (Principle 2), the Convention on Biological Diversity (Article 3) and the UNFCCC (in recital 8 of its preamble) repeat Principle 21 of the Stockholm Declaration almost verbatim.<sup>7</sup> Article 194 paragraph 2 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) states: "States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment,..."<sup>8</sup>

While it has been questioned whether the no-harm rule is adequately reflected in actual state practice to represent customary international law<sup>9</sup> its existence has been authoritatively confirmed by the International Court of Justice (ICJ). In the advisory opinion on the threat or use of nuclear weapons the ICJ explicitly stated that "[t]he 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".<sup>10</sup> The Court repeated these findings in the case concerning the Gabčíkovo-Nagymaros dam (Hungary v. Slovakia)<sup>11</sup> and most recently in the case concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay).<sup>12</sup>

The latter judgement states that "[a] State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State." In this connection, the ICJ refers to the no-harm rule as the 'principle of prevention' and points out that as a customary rule it has its origins in the due diligence that is required of a State in its territory.<sup>13</sup>

The Trail Smelter arbitration is widely accepted as the starting point for the development of the no-harm rule. But while the case only dealt with transboundary harm to other (neighbouring) states, the Stockholm principles and other subsequent international agreements also include the global commons. States are under an obligation to protect the environment of other states and in areas beyond national jurisdiction from damage caused by activities on their territory.

While contemporary elaborations of the no-harm rule tend to refer to any damage to the environment they also recognise that environmental protection has to be balanced against the sovereign right to exploit national resources. States neither have the freedom to carry out all activities on their territory regardless of the consequences, nor the absolute right to be free of impacts from other states.<sup>14</sup> As a result, there is a general consensus that transboundary interference must be "of serious consequence" and cause at least "significant", "substantial" or "appreciable"

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<sup>6</sup> Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), UN Doc. A/CONF/48/14/REV1, Principle 21.

<sup>7</sup> Declaration of the UN Conference on Environment and Development (Rio Declaration), UN Doc. A/CONF.151/26/Rev.1, Principle 2; UNFCCC (adopted 9 May 1992, in force 21 March 1994), preamble, recital 8; Convention on Biological Diversity (adopted 22 May 1992, in force 29 December 1993), Art.3; see also: UN Convention on the Law of the Non-navigational Uses of International Watercourses (adopted 21 May 1997, not yet in force) Article 7; preambles to 1994 Convention to Combat Desertification, 2001 Convention on Persistent Organic Pollutants, and 2006 International Tropical Timber Agreement.

<sup>8</sup> United Nations Convention on the Law of the Sea (adopted 10 December 1982, in force 16 November 1994) (UNCLOS), Article 194(2).

<sup>9</sup> John Knox, The Myth and reality of transboundary environmental impact assessment, *American Journal of International Law* 97 (2002), p.291, 295.

<sup>10</sup> ICJ, Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, ICJ Reports 1996, p.226 para.29. ICJ cases and advisory opinions can be accessed through <http://www.icj-cij.org>.

<sup>11</sup> ICJ, Judgement, Case concerning the Gabčíkovo-Nagymaros Project (Hungary v. Slovakia), ICJ Reports 1997, p.41, para.53.

<sup>12</sup> ICJ, Judgement, Case concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay), 2010 ICJ Reports 1, 38, para.101.

<sup>13</sup> ICJ, Judgement, Case concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay), 2010 ICJ Reports 1, 38, para.101.

<sup>14</sup> Birnie, Boyle, Redgwell, p.146.

harm. Minimal, trivial or simply detectable impacts do not meet that threshold.<sup>15</sup> A detrimental effect on matters such as human health, property or agriculture broadly measurable in monetary terms is required to trigger the application of the no harm rule.<sup>16</sup>

### 3. Application to climate change

The preamble of the UNFCCC recalls that “States have, ... , the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction”. It confirms that the no-harm rule forms part of the international law surrounding climate change, and has some relevance to the relationship between parties to the Convention. However, to date, if and to what extent the concept can be directly applied to the negative impacts of climate change and global warming remains an open question.

In 2007, the Intergovernmental Panel on Climate Change (IPCC) found that there is a better than nine in ten chance that global warming can be attributed to emissions of carbon dioxide from industry, transport, deforestation and other human activities.<sup>17</sup> As a result, many countries will be affected by extreme weather events such as heat waves, cyclones and a rise in the intensity of droughts as well as slow onset processes (e.g. sea level rise).<sup>18</sup> It is projected that in Africa between 75 and 250 million people will be exposed to increased water stress by 2020.<sup>19</sup> The UN Office for the Coordination of Humanitarian Affairs has estimated that in 2008 over 20 million people were displaced by sudden-onset climate-related disasters.<sup>20</sup> A report of the Global Humanitarian Forum estimated that climate change already causes 300,000 deaths per year throughout the world and seriously impacts on the lives of 325 million people.<sup>21</sup> The UNFCCC has found that it could cost about USD 70 to 100 billion per year by 2030 to deal with the worst impacts of climate change.<sup>22</sup> Other scientists suggest that the true annual cost could reach USD 300 billion or more.<sup>23</sup> There is also a growing body of research that determines and quantifies in monetary terms the harm of climate change to individual states.<sup>24</sup>

Hence, there is considerable evidence that human activities releasing large amounts of greenhouse and other gases into the atmosphere result in serious not just trivial harm. However, as a scientific phenomenon climate change does not fit the traditional legal and factual conception of transboundary pollution. Unlike in the Trail Smelter case there is no immediate link between cause and effect - the physical emissions on one side of the border and the damage on neighbouring

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<sup>15</sup> Guenther Handl, Trail Smelter in contemporary international environmental law, in Rebecca Bratspies, Russel Miller et al. (eds.), *Transboundary Harm in International Law*, Cambridge University Press, 2006.

<sup>16</sup> International Law Commission, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, 2001, Art.2, commentary para.4.

<sup>17</sup> IPCC, Fourth Assessment Report, 2007, available at [http://www.ipcc.ch/publications\\_and\\_data/publications\\_and\\_data\\_reports.htm#1](http://www.ipcc.ch/publications_and_data/publications_and_data_reports.htm#1).

<sup>18</sup> IPCC, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK, and New York, NY, USA, 2012

<sup>19</sup> IPCC, Fourth Assessment Report, 2007.

<sup>20</sup> United Nations Office for the Coordination of Humanitarian Affairs, Internal Displacement Monitoring Centre, *Natural disasters and forced displacement in the context of climate change*, September 2009.

<sup>21</sup> Global Humanitarian Forum, *Human Impact Report: Climate Change – The Anatomy of a Silent Crisis*, May 2009, available at [http://www.preventionweb.net/files/9668\\_humanimpactreport1.pdf](http://www.preventionweb.net/files/9668_humanimpactreport1.pdf).

<sup>22</sup> UNFCCC, *Investment and financial flows to address climate change*, Bonn, 2007.

<sup>23</sup> Martin Parry, Nigel Arnell, et al., *Assessing the costs of adaptation to climate change: A critique of the UNFCCC estimates*, International Institute for Environment and Development (IIED), August 2009.

<sup>24</sup> For example: Ramón Bueno, Cornelia Herzfeld et al, *The Caribbean and Climate Change: The costs of Inaction*, Stockholm Environment Institute, May 2008; Nicholas Stern, *Stern Review on the Economics of Climate Change*, 2006; Friederike Otto, Neil Massey et. al., *Reconciling two approaches to attribution of the 2010 Russian heat wave*, *Geophysical Research Letters* Vol.39 (2012); Anil Ananthaswamy, *Time to blame climate change for extreme weather*, *New Scientist*, 25 August 2010; and also Adaptation Fund projects at <http://www.adaptation-fund.org/projectprogrammeproposals>.

territory. Instead a multitude of emissions from various sources alter the composition of the Earth's atmosphere – the envelope of gases surrounding the atmosphere.

The atmosphere is the space between the Earth surface and outer space. It is divided vertically into four spheres based on temperature characteristics: troposphere, stratosphere, mesosphere and thermosphere. Trace amounts of greenhouse gases such as carbon dioxide, nitrous oxide or methane are naturally found in the atmosphere. They let sun rays enter but stop some heat from escaping to outer-space, and thus keep the Earth warm (the greenhouse effect). As people release more greenhouse gases into the atmosphere the layers of these gases 'thicken' and more of the heat of the sun gets trapped inside the atmosphere ('enhanced greenhouse effect'). The planet warms up.

In comparison to traditional air pollution, the effects of climate change are more diffuse and difficult to track back to any one state's failure to avoid activities that cause significant damage to the environment of another state or in areas beyond national jurisdiction. Any harm may be perceived as the result of the accumulation of complex and synergetic effects of diverse contributory factors involving different pollutants and polluters.<sup>25</sup>

#### a) 'Traditional' transboundary harm

Recent research, however, indicates that the so called greenhouse gases are only responsible for about 60% of global warming. 'Traditional' air pollutants that directly affect human health, such as 'black carbon' (i.e. soot) and 'tropospheric ozone', could be responsible for up to 40 %.<sup>26</sup> Black carbon, for example, is formed through the combustion of solid fuels. Most of it currently originates in developing countries. It warms the Earth by absorbing heat in the atmosphere and by reducing the ability to reflect sunlight when deposited on snow and ice. This causes melting and over longer periods of time further reduces the surface reflectivity of the Earth. Black carbon may also indirectly cause changes in the absorption or reflection of solar radiation through changes in the properties and behaviour of clouds.<sup>27</sup>

But whereas CO<sub>2</sub> has an atmospheric lifetime of more than 100 years, black carbon and ozone are 'short lived climate forcers' that remain in the atmosphere for only several days or weeks.<sup>28</sup> To date, these gases are not covered by the Kyoto Protocol. They tend to stay within the troposphere – the lowest layer of the atmosphere – and their transport and dispersion is limited. It may therefore be easier to demonstrate an impact on neighbouring territories and perceive their harmful impact in the traditional transboundary context.

#### b) Harm to areas beyond national jurisdiction

Under contemporary international law, states are under an obligation to ensure activities within their jurisdiction and control respect not only the environment of other states but also areas beyond national jurisdiction. This can mean the high seas and "Area" as defined under UNCLOS, outer space, the atmosphere and arguably the Arctic and Antarctica.

As climate change deviates from the established model of transboundary pollution it has been suggested to focus on the harm that climate change inflicts on the global commons in areas beyond

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<sup>25</sup> Christina Voigt, *State Responsibility for Climate Change Damages*, Nordic Journal of International Law, Vol. 77 Nos. 1-2, 2008, p.10.

<sup>26</sup> DG Environment, News Alert Service, Science for Environment Policy, Air Pollution and Climate Change, Issue 24, November 2010; UNEP and WMO, *Integrated Assessment of Black Carbon and Tropospheric Ozone: Summary for Decision Makers*, 2011.

<sup>27</sup> DG Environment, UNEP and WMO.

<sup>28</sup> In December 2010 Parties to the LRTAP Convention decided to include black carbon, ozone and methane in the work plans of the Convention.

national jurisdiction.<sup>29</sup> The effects of climate change on the oceans and the Polar Regions as well as the associated financial implications (e.g. damage to fish stocks or loss of territory) are becoming increasingly clear and measurable in monetary terms. In comparison, it may be less convincing to consider minor changes to the chemical composition of the atmosphere itself as the harm in question.

#### c) Harm to other states without common borders

To date, the legal status of the atmosphere (e.g. as common property, heritage or concern) has not been determined. In terms of physical structure and characteristics the atmosphere is not a spatial domain but rather a fluid, single and non-partitionable unit of air that flows through national boundaries and areas beyond national jurisdiction depending on atmospheric circulation and jet streams.<sup>30</sup> It is mainly the layer of gases in the troposphere and the stratosphere (the lower layers of the atmosphere) within which the transport and dispersion of airborne substances occur.<sup>31</sup>

Article 2(c) of the International Law Commission's (ILC) Draft Articles on Prevention of Transboundary Harm from Hazardous Activities defines 'transboundary harm' as harm caused in the territory of another state "whether or not the States concerned share a common border".<sup>32</sup> The ILC focuses on the actions and omissions of the state under whose jurisdiction and control a relevant activity is undertaken and its relationship with other states that could potentially be affected. In this connection, it explicitly recognises the limited relevance of political boundaries in addressing international environmental problems.<sup>33</sup> Its perception of 'transboundary' appears to include any negative impacts across nations not necessarily across borders or adjacent territories.

#### d) Due diligence

Based on the ILC's work, the legal literature increasingly describes the principle of prevention as emanating from the concept of due diligence – a standard of care for government authorities.<sup>34</sup> Due diligence is said to comprise at least the following elements: the opportunity to act or prevent; foreseeability or knowledge that a certain activity could lead to transboundary damage; and proportionality in the choice of measures required to prevent harm or minimise risk.<sup>35</sup> If, despite the foreseeability of events, proportionate measures which are capable of protecting the environment were not taken, a state may be considered careless and potentially liable for the resulting harm.<sup>36</sup>

Many developed countries had an opportunity to reduce the risks from greenhouse gas emissions by limiting their emissions through stricter regulations and control measures, the introduction of renewable energies or encouraging lifestyle changes of their populations. They have known of the effects of increasing atmospheric concentration of CO<sub>2</sub> on the heat balance of the Earth and the consequent risk of damage for decades. At least since 1992, when the UNFCCC was agreed to stabilise greenhouse gas emissions, parties to the Convention have explicitly recognised this link. In view of the risks related to global warming and the potential impacts on particularly vulnerable

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<sup>29</sup> International Law Association, Legal principles related to climate change, Draft Committee report, June 2012, available at <http://www.ila-hq.org/en/committees/index.cfm/cid/1029>.

<sup>30</sup> Shinya Murase, Protection of the atmosphere, Annex B, Report of the International Law Commission, 63<sup>rd</sup> session, 2011, UN GA Resolution 66/10.

<sup>31</sup> IPCC, Fourth Assessment Report, Chapter 2.

<sup>32</sup> Report of the International Law Commission (ILC), 53<sup>rd</sup> session, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities with commentaries, 2001, A/56/10.

<sup>33</sup> ILC, Draft Articles, Art.2, Commentary, para.5.

<sup>34</sup> Birnie, Boyle and Redgwell, pp. 143-152.

<sup>35</sup> ILC, Draft Articles.

<sup>36</sup> Roda Verheyen and Peter Roderick, Beyond Adaptation: The legal duty to pay compensation for climate change damage, WWF-UK, 2008, p.20.

countries and society, early actions taken to limit emissions, even at the expense of further economic growth in already affluent societies, might well be considered proportionate.

#### 4. Preliminary conclusion

It appears difficult to argue against the application of the principle of prevention or 'no harm' in its contemporary form, at least in parts, to climate change. In comparison to traditional cases of transboundary pollution, however, it will be more challenging to link cause and effect in order to establish some form of legal liability. But this should not put in doubt the application of the legal principle. It merely reflects the various complex legal and scientific questions pertaining to climate change. For example: the attribution of damages, causation, the standard of proof, striking a balance between sovereign rights to exploit natural resources and protecting the global environment, possible justifications or whether states can be held jointly and severally liable.