Interstate liability for climate change-related damage
Kosolapova, E.

Citation for published version (APA):
Kosolapova, E. (2013). Interstate liability for climate change-related damage

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3 Identification of International Liability Regimes Relevant to Climate Change-Related Damage

3.1 Introduction

Interstate liability can be established under primary and secondary norms of international law. In the law of state responsibility, international obligations regulating the conduct of international actors in a specific sector of interstate relations are referred to as primary rules of international law. The determination of legal consequences of a state’s failure to fulfil those obligations is often not governed by the primary rules of a particular sector, but rather by the secondary rules of international law. When arising from primary norms of international law, interstate liability may be more accurately described by the generally accepted term ‘state liability’ and is triggered when lawful acts of a state lead to harm in another state’s territory. In contrast, state responsibility is engaged under secondary rules of international law codified by the International Law Commission (ILC) in its Articles on Responsibility of States for Internationally Wrongful Acts. It is distinct from state liability in that it is predicated on the existence of an internationally wrongful act.

The present chapter is based first and foremost on the differentiation between state liability on the one hand and state responsibility on the other. Often understated in academic literature, this distinction is fundamental to any discussion of liability at the interstate level. While the former is grounded in specific primary rules of international law and is applied in situations when lawful conduct of a state has resulted in harm to another state, the latter pertains to secondary norms regulating the consequences of state acts that are considered internationally wrongful.

In dealing with state liability, the chapter addresses various liability mechanisms under MEAs and distinguishes four conceptual approaches based on the nature of international obligations the relevant primary norms create. Depending on the approach adopted by a particular legal regime, state liability may give rise to: (1) the obligation to pay compensation, (2) the obligation to negotiate a redress settlement; (3) the obligation to ensure prompt, adequate, and effective compensation; or (4) the obligation to take response action. After analysing the various approaches to state liability under primary rules of international law, the

chapter shifts its focus to secondary norms of international law that regulate matters of state responsibility following commission of an internationally wrongful act.

### 3.2 State Responsibility vs. State Liability

Some international legal regimes are strengthened by liability provisions designed to remedy instances when lawful conduct results in damage. Examples include: the 1972 Convention on International Liability for Damage Caused by Space Objects (Space Liability Convention); the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;\(^\text{157}\) and the 2010 Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the CBD. Those provisions are based on different approaches to state liability and, as will soon be demonstrated, are often limited in scope. All state liability mechanisms, regardless of the approach they are based on, share an important characteristic: they all address the injurious consequences of acts that are lawful. As mentioned earlier, the determination of the legal consequences of a state’s conduct that is internationally wrongful is governed by the law of state responsibility. State responsibility requires a breach of an international obligation while state liability arises out of ‘harm alone’ whereby proof of an internationally wrongful act is not a requirement.\(^\text{158}\) Also, Kiss & Shelton note that nowadays, ‘international environmental law has come to distinguish [1] responsibility, which arises upon breach of an international obligation, and [2] liability for the injurious consequences of lawful activities.’\(^\text{159}\) Lefeber makes the same distinction by describing state responsibility as ‘liability \textit{ex delicto}’ and referring to state liability as ‘liability \textit{sine delicto}.’\(^\text{160}\) In other words, state responsibility originates from acts that are internationally wrongful and as such may be distinguished from ‘liability for the deleterious effects of lawful acts.’\(^\text{161}\)

In international law, states’ obligations under treaties or international custom are referred to as primary rules, whereas the consequences of a state’s failure to act in accordance with its international obligations are determined by secondary rules of international law, or the law of state responsibility. The law of state responsibility has three main functions: (1) preventive function, aimed at dissuasion from engaging in conduct that could result in an internationally wrongful act; (2) enforcement of primary international obligations, or corrective function; and (3) compensatory, or reparative, function aimed at a restoration of the status quo ante or compensation for damages caused by an internationally wrongful act. This ‘triple function’ of the international law of state responsibility is reflected in the Articles on Responsibility of States for Internationally Wrongful Acts (Articles on State Responsibility or ILC Articles) drafted by the ILC.\textsuperscript{162}

The ILC’s work on the Articles dates back to 1963 when the Commission decided to limit its work to secondary rules as codification of secondary as well as primary obligations appeared to be an impossible task due to the ‘infinitely varying nature’ of the latter.\textsuperscript{163} The distinction between primary and secondary rules is fundamental to the Articles. It was put forward by Special Rapporteur Ago who considered it impossible to move forward without distinguishing between those two sets of rules. Ago felt that primary rules and the obligations they imposed were inherently different from secondary rules that determined whether or not the obligation set by a particular primary rule had been violated. To use Crawford’s explanation, ‘the key idea is that a breach of a primary obligation gives rise, immediately by operation of the law of state responsibility, to a secondary obligation or series of such obligations’ and the Articles ‘specify the default rules that determine when a breach occurs and, in general, the content of the resulting secondary obligations.’\textsuperscript{164} The breach of a primary obligation, in other words, ‘gives rise to a new legal regime, that of state responsibility, that contains its own distinctive set of duties and rights.’\textsuperscript{165} Today, the term state responsibility is ‘widely used to denote secondary rules, following the decision of the ILC to limit its articles on state responsibility to these.’\textsuperscript{166}

Even though the focus on secondary rules of international law was intended to facilitate the ILC’s work, it took the Commission more than forty years to complete

\textsuperscript{162}Lefeber 1996, p. 313; see also Hoss 2005, p. 455.
\textsuperscript{166}Fitzmaurice 2007, p. 1011.
the draft. It was finalized in August 2001 and the UN General Assembly took note of it in its Resolution 56/83 in December 2001. The Articles on Responsibility of States for Internationally Wrongful Acts focus on ‘the general conditions under international law for the State to be considered responsible for wrongful actions or omissions, and the legal consequences which flow therefrom,’ i.e. they apply to all areas of international law. While dealing only with conduct that is internationally wrongful, the Articles cover ‘the whole field of the international obligations of States, whether the obligation is owed to one or several States, to an individual or group, or to the international community as a whole.’ It is significant that in addressing state responsibility vis-à-vis one state, a group of states or the entire international community, the Articles could provide ‘an important mechanism to cultivate responsibility for state conduct that breaches obligations to protect common concerns of humanity – such as biodiversity and the atmosphere.’ In spite of the fact that state responsibility does not cover the liability of private actors who are largely responsible for pollution as such, it has played an increasingly important role in environmental law. It is submitted that the Articles’ framework could also be extended to encompass interstate responsibility for the injurious consequences of climate change (see Chapter 5).

3.2.1 State Liability

If, in its general aspects, international law is relatively straightforward on the issue of state responsibility arising out of acts that are considered internationally wrongful, it is far less uniform in cases when harm is caused by a lawful act of the state. Depending on the nature of the regulated activity, situations when harm is caused by the state’s lawful acts are governed by a number of state liability regimes. The current section deals with the various conceptual approaches to state liability in international law and evaluates the suitability of those approaches for addressing climate change-related damage based on the following criteria, as appropriate: legal

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167 Responsibility of States for internationally wrongful acts, GA Res. 56/83 (28 January 2002); see also Kiss & Shelton 2007b, p. 1135.
170 Drumbl, 2006, p. 89.
feasiability, political feasibility, conceptual fittingness, and systemic compatibility. As mentioned in the previous section, state liability is distinct from state responsibility in that it does not depend on wrongfulness and is triggered when harm is caused by activities permitted by a state that are lawful.

The approach to state liability addressed first involves the obligation to pay compensation. It dates back to the 1960s when the proliferation of space and nuclear activities alerted mankind to the new risks associated with the administration of those ultra-hazardous activities. Although liability for the operation of nuclear power plants and transportation of nuclear substances is mainly subject to civil liability regimes, some international agreements governing ultra-hazardous activities have opted for state liability. The section below provides an analysis of the obligation to pay compensation based on the example of the 1972 Convention on International Liability for Damage Caused by Space Objects. The second approach refers to the obligation to negotiate a redress settlement and is reflected, for instance, in the 1997 Convention on the Law of Non-navigational Uses of International Watercourses, considered in Section 3.2.1.2. The third approach is concerned with the obligation to ensure prompt, adequate, and effective compensation. This approach is chiefly adopted by international civil liability regimes; however limited possibilities for state liability are also envisaged by the ILC 2001 Principles on Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, which are analysed in Section 3.2.1.3. The fourth approach imposes on states the obligation to require the appropriate operators to take response action in the event of damage. Examples of international legal instruments relying on this approach include the 2005 Annex VI to the 1991 Protocol on Environmental Protection to the Antarctic Treaty (Liability Arising from Environmental Emergencies) and the 2010 Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the CBD, an examination of which will conclude the section on state liability.


3.2.1.1 Obligation to Pay Compensation

In environmental law, strict liability of states is usually associated with ultra-hazardous activities involving significant risk – activities that are considered ‘especially new or dangerous.’\(^{174}\) The concept of strict liability of states has been developed to facilitate the recovery of compensation for harm caused by ultra-hazardous activities of nuclear and space-exploration nature.\(^{175}\) The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space (Outer Space Treaty) provides that

> [e]ach State Party to the Treaty that launches or procures the launching of an object into outer space, including the Moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air space or in outer space, including the moon and other celestial bodies.\(^{176}\)

The 1972 Space Liability Convention expands on the liability rules of the Outer-Space Treaty and provides a legal framework for the settlement of claims associated with harm arising out of space activities. Under the Space Liability Convention, the compensatory remedy is available to the injured state under an absolute liability scheme in cases of damage caused by space objects on the surface of the Earth or to aircraft in flight (Art. II). In cases of damage to a space object of one launching state by a space object of another launching state elsewhere than on the surface of the Earth, liability of the latter state is fault-based (Art. III). Specifically, the liability of the launching state extends to ‘its fault or the fault of persons for whom it is responsible.’ Two launching states (also in cases of joint launching) are jointly and severally liable for damage caused to a third state (Arts. IV(1) and V(1)). Their liability is absolute if the damage has been caused to a third state on the surface of the Earth or to aircraft in flight; in cases of damage occurring elsewhere, liability to third states is based on fault (Arts. IV(1)(a-b)).

\(^{175}\) Lefeber 1996, p. 159.
As far as the amount of compensation payable is concerned, the Space Liability Convention follows the principle of full compensation.\textsuperscript{177} Article XII provides:

The compensation which the launching State shall be liable to pay for damage under this Convention shall be determined in accordance with international law and the principles of justice and equity, in order to provide such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred.

If a claim is not settled through diplomatic negotiations in accordance with Article IX, a Claims Commission may be established (Art. XIV). The Space Liability Convention does not set any maximum liability limits and the Claims Commission does not only decide on the merits of the claim but also determines the amount of compensation payable (Art. XVIII). It must be stressed, however, that the Space Liability Convention supports state liability only vis-à-vis other states and does not grant procedural access to victims.

The Space Liability Convention is subject to a number of limitations as its scope only extends to damage caused by space objects. Such occurrences are rather uncommon and no claims have been brought under the Convention to date. However, one incident that almost resulted in a formal compensation claim must be mentioned. In January 1978, Cosmos 954, a Soviet satellite carrying a nuclear reactor, re-entered the Earth’s atmosphere, partially disintegrated, and left a trail of radioactive debris over a remote territory in northern Canada.\textsuperscript{178} Canada undertook extensive clean-up activities and, in January 1979, presented to the Soviet Union a formal claim for compensation asserting that the USSR was absolutely liable to pay compensation under Article II of the Space Liability Convention. Canada demanded six million dollars in compensation. The Soviet Union rejected the claim and, after lengthy negotiations between the two governments, in 1981 a protocol was concluded in accordance with which the USSR agreed to pay compensation of three million dollars ‘in full and final settlement of all matters connected with the disintegration of the Soviet satellite Cosmos 954 in January 1978.’\textsuperscript{179} Although the ultimate resolution of the Cosmos 954 case was not based on the Convention as it


\textsuperscript{179} Böckstiegel 1992, p. 206.
was settled through the payment of a lump sum, the incident revealed a regulatory gap with regard to the use of nuclear power sources in outer space. The applicability of the 1972 Space Liability Convention to nuclear power sources, as well as the inclusion of ‘expenses for search, recovery and clean-up operations’ in cases of damage caused by space objects, were subsequently clarified in the Principles Relevant to the Use of Nuclear Power Sources in Outer Space adopted by the UN General Assembly in 1992.180

Next to the Space Liability Convention, the only other treaty that imposes absolute liability on states is the obsolete 1987 Council for Mutual Economic Assistance (CMEA) Convention on Liability for Damage Caused by Radiological Accidents in International Carriage of Irradiated Nuclear Fuel from Nuclear Power Plants.181 Other treaties concerned with nuclear accidents as well as treaties governing oil pollution at sea do not follow this approach but rather opt for civil liability regimes.182

In international law, treaties envisaging unlimited compensation in an absolute liability context are extremely rare, and the Space Liability Convention is the only example of an operational international treaty creating an obligation to pay compensation as a primary rule of state liability in its pure form. Under the Convention, the absolute obligation to pay compensation is not based on wrongfulness but is triggered by the occurrence of damage leading to liability since delicto. In the 1970s, when states had a monopoly over operation and launching of space objects, such an approach seemed sensible. With the space activities’ continuing spill into the private sector, it would be unlikely for the Space Liability Convention to take the same shape today as states appear ‘willing to accept liability for their own conduct, but not for that of private actors.’183

180 Principles Relevant to the Use of Nuclear Power Sources in Outer Space, UN Res. 47/68 (1992), Principles 9(1) and 9(3).
183 Kiss & Shelton 2007a, p. 29; Kiss & Shelton 2007b, p. 1140.
3.2.1.1 Obligation to Pay Compensation and Climate Change-Related Damage

In principle, the approach to liability based on the obligation to pay compensation would be an attractive option as far as potential claimant states are concerned. Conceptually, it is not inconceivable to seek compensation for damage caused through the emission of GHGs. However, most of GHG emissions contributing to global warming originate from the private sector, and, politically, states are reluctant to accept absolute liability for the conduct of private actors. The private-actor issue also makes absolute liability of states systemically incompatible with climate change-related damage.

Next, from a legal point of view, the absolute liability approach is unsuitable for addressing climate change-related damage due to causation challenges. The difficulty of tracing climate change-related damage in one country to GHG emissions originating in another, coupled with the fact that no country is carbon-neutral, would prevent the imposition of absolute liability on any one state because every state must be deemed to have contributed to climate change. Also, in environmental law, the absolute liability standard is usually associated with activities carrying significant risk. In and of itself, the emission of GHGs is not risky, nor is it especially new or particularly dangerous. GHGs are only capable of causing the warming of the Earth’s atmosphere in great concentrations that are achieved over a considerable period of time through emissions from a great many sources.

3.2.1.2 Obligation to Negotiate a Redress Settlement

The obligation to negotiate a redress settlement has been considered by the ILC in its work on ‘international liability for injurious consequences arising out of acts not prohibited by international law.’ The obligation to negotiate in good faith on the reparation of transboundary harm in the absence of an internationally wrongful act was first introduced by the ILC’s Special Rapporteur Robert Quentin Quentin-Baxter who saw it as a substitute for the duty to prevent. In his view, liability would only arise when the harm has occurred and the causal link can be demonstrated. According to Quentin-Baxter, negotiations should be guided by ‘shared expectations’ of the source state and the affected state, and failure to reach a settlement would necessitate referral of the dispute to a dispute settlement procedure. Later on, his successor Julio Barboza similarly proposed that liability

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disputes be resolved through the procedural obligation to negotiate to determine the legal consequences of harm bearing in mind that the harm must, in principle, be fully compensated. If transboundary harm occurs, diligent behavior does not exempt the source state from the duty to negotiate with affected states. Ultimately, Barboza, as well as his successor Rao, embraced the obligation to ensure prompt, adequate, and effective compensation as a consequence of transboundary harm in the absence of an internationally wrongful act (see Section 3.2.1.3).

Thus, there are few sources of international law providing support for the obligation to negotiate a redress settlement. The 1997 Convention on the Law of the Non-navigational Uses of International Watercourses, adopted when the ILC was still pursuing the obligation to negotiate a redress settlement, is one of them.\(^{185}\) Under the Convention, the obligation to negotiate a redress settlement is aimed at the reparation of transboundary harm when such harm has occurred despite the source state’s diligent conduct. The due diligence obligation to prevent is reflected in Article 7(1) whereby in utilizing an international watercourse in their territories, watercourse states shall ‘take all appropriate measures to prevent the causing of significant harm’ to other watercourse states. Should significant harm be caused in spite of diligent behaviour on the part of the source state, the latter shall, in consultation with the affected state, take all appropriate measures to eliminate and mitigate such harm and, where appropriate, discuss the question of compensation (Art. 7(2)). However, although states may be duty-bound to consult, they can neither be obligated to reach an agreement, including on compensation, nor can they be required to refer the dispute to a third party for settlement. In the event of a dispute concerning the interpretation or application of the Convention, the dispute settlement procedure is triggered, in accordance with which, if unable to reach agreement by negotiation requested by one of them, the parties to the dispute may jointly have recourse to good offices, mediation and conciliation, or even arbitration or adjudication (Art. 33(2)). All those means of dispute settlement are subject to agreement by the state and therefore cannot be considered compulsory.

3.2.1.2.1 Obligation to Negotiate a Redress Settlement and Climate Change-Related Damage

The approach to liability based on the duty to negotiate on the reparation of transboundary harm when no internationally wrongful act has been committed has

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not taken root in international law due to lack of political acceptance, save a handful of sources with limited applicability.\textsuperscript{186} Thus, politically, it is improbable that this approach should be used in the context of climate change-related damage.

While suitable in situations such as those involving a major water project, this approach would be of little utility in the climate change context. The approach based on the obligation to negotiate a redress settlement functions with individual projects, generally prior to their implementation, and, systemically, is unfit to address climate change-related damage, which is caused by GHG emissions from multiple sources.\textsuperscript{187}

### 3.2.1.3 Obligation to Ensure Prompt, Adequate, and Effective Compensation

Another approach to state liability consists in obligating the source state to ensure that victims of transboundary damage receive prompt, adequate, and effective compensation whereby temporal, quantitative, and qualitative considerations are respectively taken into account.

In 1997, the ILC separated the concepts of liability and prevention, and subdivided its work on international liability for injurious consequences arising out of acts not prohibited by international law into two parts: prevention of transboundary damage from hazardous activities and international liability in case of loss from transboundary harm arising out of hazardous activities. In December 2001, the UN General Assembly reviewed, and expressed its appreciation for, the ILC’s Draft Articles on Prevention of Transboundary Harm from Hazardous Activities and requested the Commission to proceed with its work on international liability. In 2006, the ILC adopted a set of Principles on Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities and later that year, the General Assembly took note of the Principles in its Resolution 61/36 on Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities.\textsuperscript{188}

The obligation to ensure prompt, adequate, and effective compensation performs a reparative function in cases when the state has complied with its due diligence obligation to prevent transboundary environmental harm under customary international law but damage has nonetheless been caused.\textsuperscript{189} It is an obligation

\textsuperscript{186} Lefeber 1996, p. 220.

\textsuperscript{187} Political and systemic unsuitability of this approach to climate change-related damage makes considerations of a legal and conceptual nature redundant.

\textsuperscript{188} Allocation of loss in the case of transboundary harm arising out of hazardous activities, GA Res. 61/36 (4 December 2006).

\textsuperscript{189} On the obligation to prevent significant transboundary harm, see Section 5.2.3; see Section 3.2.2.2 for the distinction between absolute obligations and obligations of due diligence.
directed at the achievement of a particular result, one of compensating the victims of transboundary harm in a prompt, adequate, and effective manner. It has been suggested that the obligation to ensure prompt, adequate, and effective compensation should be extended to all transboundary environmental interference, irrespective of its nature, in order to provide victims with financial guarantees against harm caused by hazardous and non-hazardous activities alike.\(^{190}\) At present, however, this obligation can only be discerned in respect of harm arising out of hazardous activities, which is reflected in the ILC’s 2006 Principles on Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities. It has been the practice adopted by international agreements and municipal laws to limit the applicability of special civil liability regimes on the basis of the nature of the activity.\(^{191}\)

As their title indicates, the Principles apply to transboundary damage caused by hazardous activities not prohibited by international law. This notion comprises four elements: (1) such activities are not prohibited by international law; (2) they carry a risk of causing significant harm; (3) harm must be transboundary; and (4) the transboundary harm must be caused by such activities through their physical consequences (harmful impacts caused by trade, monetary, socio-economic or fiscal policies are thereby excluded from the Principles’ scope).\(^{192}\) Thus, the liability regime embodied in the Principles focuses on the consequences of an activity rather than its lawfulness. Under the Principles, hazardous activities are understood to refer to ‘activities that have a high probability of causing significant transboundary harm or a low probability of causing disastrous transboundary harm.’\(^{193}\) Significant harm must be construed to mean ‘something more than ‘detectable’ but not necessarily at the level of ‘serious’ or ‘substantial.’\(^{194}\) The significance threshold is essential to identify damage eligible for compensation and to ensure that no frivolous claims are launched. Harm that does not reach the level of significant is considered tolerable.\(^{195}\)

\(^{190}\) Lefeber 1996, p. 233.
\(^{191}\) See Lefeber 1996, pp. 239-254.
The Principles provide a general framework for the conclusion of international agreements and adoption of domestic laws to cover situations when the state has complied with its duty of due diligence to prevent transboundary damage but the harm has nevertheless been caused. Non-binding in nature, they encourage states to make all efforts to conclude specific international agreements in respect of particular categories of hazardous activities whereby arrangements should be made with regard to compensation, response measures, and international and domestic remedies (Principle 7). States should also adopt the necessary national measures to implement the Principles through domestic legislation (Principle 8(1)).

The purpose of the Principles on Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities is twofold: (a) to ensure prompt and adequate compensation to victims of transboundary damage and (b) to preserve and protect the environment *per se* in the event of transboundary damage, especially with respect to mitigation of damage to the environment and its restoration and reinstatement (Principle 3). The purpose of ensuring prompt and adequate compensation to victims relates to the need to protect victims by requiring ‘measures of prevention that as far as possible avoid the risk of loss or injury and, insofar as it is not possible, measures of reparation.’ The ILC has treated prevention and reparation of harm as two sides of the same coin as the obligation to ensure compensation to victims derives from situations when, despite due diligence, harm could not be prevented (see Section 3.2.1.2).

The underlying premise of the idea that victims of transboundary damage must be promptly and adequately compensated can be found in the Trail Smelter arbitration and the *Corfu Channel* case and was subsequently reflected in the 1972 Stockholm Declaration (Principle 21) and in the 1992 Rio Declaration (Principle 2):

> States have, in accordance with the Charter of the United Nations and principles of international law, 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.

The international community shares a common conviction that states shall cooperate to develop international and municipal law regarding liability and

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compensation for victims. The definition of victim is closely connected with the question of standing and covers ‘natural and legal persons, and includes the State as custodian of public property.’ Locus standi is more difficult to establish in instances when harm is caused to the environment per se, i.e. to the environment itself irrespective of whether damage is simultaneously caused to persons or property. Thus, some domestic liability regimes provide standing to non-governmental organizations or public trustees.

In giving prominence to the protection of the environment, the Principles recognize the importance of preserving this shared resource for the present and future generations and acknowledge that ‘damage to the environment per se could constitute damage subject to prompt and adequate compensation, which includes reimbursement of reasonable costs of response and restoration or reinstatement measures undertaken.’

In accordance with their purpose, the Principles adopt a two-pronged approach to liability whereby states are required to ensure prompt and adequate compensation to victims on the one hand, and to take response measures on the other (see Section 3.2.1.4). As regards prompt and adequate compensation, states should take all necessary measures to ensure that it is available to victims of transboundary damage caused by hazardous activities located within their territory or within areas under their jurisdiction or control (Principle 4(1)). Those measures should include the imposition of strict liability on the operator or, where appropriate, other person or entity and such liability should not require proof of fault (Principle 4(2)). States should require operators to establish and maintain financial security for the coverage of compensation claims and, where appropriate, industry-wide funds at the national level should also be established (Principle 4(3) and 4(4)). There are also examples of such funds at the international level, notably the International Oil

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200 At the municipal level, the US Oil Pollution Act confers the right to act as a public trustee upon the US Government, a State, an Indian tribe, and a foreign government; further instances include Norway, France, and India (see 2006 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, commentary to Principle 2, para. 30).
Pollution Compensation Funds (IOPC Funds).\textsuperscript{202} According to Kiss & Shelton, the Principles are in line with the existing state practice, which ‘largely channels liability to the owner or operator and requires financial guarantees to cover future claims of compensation.’\textsuperscript{203} However, should the above-mentioned measures be insufficient to provide adequate compensation, the state of origin should ensure that additional financial resources are made available (Principle 4(5)). Without directly requiring states to set aside funds guaranteeing prompt and adequate compensation to victims, this provision serves as a guideline for the adoption of best practices by the state of origin in order to ensure that ‘sufficient financial resources are available in case of damage arising from a hazardous operation situated within its territory or in areas under its jurisdiction.’\textsuperscript{204} Further, Principle 6 lists international and domestic measures designed to enable the source state and affected states to ensure minimum standards for the provision of prompt, adequate, and effective compensation to victims. States are expected to ensure those minimum standards by providing their judicial and administrative bodies with the necessary jurisdiction and competence (Principle 6(1)) and granting to victims of transboundary damage access to remedies (Principle 6(2)) and information (Principle 6(5)).

The notion of ensuring prompt and adequate compensation to victims should be seen from the cost internalization perspective, which is at the core of the polluter-pays principle.\textsuperscript{205} According to that principle, true economic costs of pollution control, clean-up, and protection measures should stay within the operational costs of the activity itself:

National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution, with due regard to the public interest and without distorting international trade and investment.\textsuperscript{206}

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\textsuperscript{202} Information on IOPC Funds is available from: <www.iopcfund.org/>.
\textsuperscript{203} Kiss & Shelton 2007a, p. 28; see also 2006 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, Principle 4.
\textsuperscript{204} 2006 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, commentary to Principle 4, para. 38.
\textsuperscript{205} 2006 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, commentary to Principle 3, para. 11.
\textsuperscript{206} 1992 Rio Declaration on Environment and Development, Principle 16.
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In seeking to provide operators with an incentive to prevent transboundary harm from hazardous activities, it has often formed the foundation for regimes based on strict liability.207

Yet, the application of the polluter-pays principle is not without limitations. Under the Principles, liability is generally channelled towards the operator and does not require proof of fault, the underlying notion being not that operators are always liable but that ‘the party with the most effective control of the risk at the time of the accident or has the ability to provide compensation is made primarily liable.’208 Legal channelling ensures that liability is placed with a single person who is easily identifiable but who is not necessarily the source of the harm.209 Thus, channelling benefits the victim by simplifying the process of claiming against operators.

The Principles do not support strict liability between states; a state could only be strictly liable if it itself is the operator.210 It has been noted that in developing the Principles, the ILC changed its focus from state liability to civil liability of operators.211 Bearing in mind the non-binding nature of the Principles, state obligations vis-à-vis non-state activities are limited: only in the event that the measures providing for operator’s liability are insufficient should the State of origin make available additional financial resources.212 The 1997 Convention on Supplementary Compensation for Nuclear Damage aimed at enhancing the system of compensation set up pursuant to the 1963 International Atomic Energy Agency (IAEA) Convention on Civil Liability for Nuclear Damage and the 1963 Brussels Convention supplementary to the 1960 Organisation for Economic Cooperation and Development (OECD) Convention on Third Party Liability in the Field of Nuclear

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208 2006 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, Principle 4(2); see also commentary to Principle 4, para. 10.


210 Kiss & Shelton 2007a, p. 28.


Energy provide a good illustration in this regard.\textsuperscript{213} The 1997 Convention, for instance, imposes upon the installation state an absolute obligation to ensure the availability of additional funds for the provision of compensation to victims to the extent that the funds from the liable operator are insufficient to cover the first tier amount fixed at 300 million Special Drawing Rights (SDRs).\textsuperscript{214} For instances when claims for compensation exceed 300 million SDRs, member states are required to contribute to an international supplementary fund to cover the second tier of compensation, the amount of which is not set. The Convention also provides for the possibility of establishing a third tier of compensation ‘provided that damage in a Contracting Party having no nuclear installations within its territory shall not be excluded from such further compensation on any grounds of lack of reciprocity.’\textsuperscript{215}

Civil liability regimes governing the use of nuclear power sources have their origin in the colossal amount of harm that can be caused by nuclear accidents and generally channel liability to operators. The 1997 Convention on Supplementary Compensation for Nuclear Damage is noteworthy in this regard as it requires states to set aside additional financial resources to be used in instances when the settlement of claims on the basis of a civil liability regime might be inadequate.

The general lack of focus on state liability (as opposed to liability of operators) in the Principles on Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities must be seen in the context of the ILC’s draft on Prevention of Transboundary Harm from Hazardous Activities.\textsuperscript{216} According to the Draft Articles, non-fulfilment of the due diligence obligation to prevent transboundary harm leads to a breach of an international obligation, which shifts the applicable legal regime to that of state responsibility discussed later in this chapter.\textsuperscript{217} If the state has complied with its due diligence duty to prevent harm from a particular hazardous activity but has failed to act in accordance with its obligation to ensure prompt, adequate, and effective compensation for the harm caused, state responsibility may likewise be engaged. In situations when harm has been caused without the commission of an internationally wrongful act, the state, in

\textsuperscript{215} 1997 IAEA Convention on Supplementary Compensation for Nuclear Damage, Art. XII(2).
\textsuperscript{216} See Kiss & Shelton 2007a, pp. 27-28.
principle, may choose whether to assume state liability or to have claims settled on the basis of a civil liability regime.  

3.2.1.3.1 Obligation to Ensure Prompt, Adequate, and Effective Compensation and Climate Change-Related Damage

The principal difference of this approach from the one involving the obligation to pay compensation is that it places primary liability with the operator and not with the state, which directly enables victims to seek compensation for the harm suffered. Albeit climate change-related damage may amount to damage to the environment per se, e.g. changes in the composition of the atmosphere, it also covers damage of a more conventional nature. Originating from slow onset events (e.g. the rising sea levels) or extreme weather events, such damage mainly involves damage to property. If the Principles were to apply to situations of damage caused by anthropogenic climate change, victims would be easily identifiable. Politically and conceptually, an approach to climate change-related damage channelling liability to operators would be feasible but it cannot withstand the rigours of a legal test. On the one hand, channelling liability to operators, i.e. GHG emitting entities, could potentially result in unreasonably wide coverage. On the other hand, a potential claimant would run into causation problems due to the multiplicity of GHG emitting sources.

Additionally, the emission of GHGs does not fall under the definition of hazardous activities and the Principles do not obligate states to ensure prompt, adequate, and effective compensation to victims of harm caused by activities that are considered non-hazardous. Thus, the approach to liability based on the obligation to ensure prompt, adequate, and effective compensation cannot be relied upon in addressing climate change-related damage due to systemic incompatibility.

3.2.1.4 Obligation to Take Response Action

The fourth approach to state liability in international law involves the obligation to take response action. The Principles on Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities analysed in the previous section provide some general guidance with regard to situations arising after the occurrence of transboundary damage. In accordance with the Principles, upon the

occurrence of an incident involving a hazardous activity, the state of origin is duty-bound to obtain from the operator the necessary information and promptly notify all (likely to be) affected states (Principle 5(a)). The source state is then expected to ensure that appropriate response measures are taken using best available technology (Principle 5(b)). It should also consult and cooperate with the affected states to mitigate and, if possible, eliminate the effects of transboundary damage (Principle 5(c)). Once notified, all affected states shall take all feasible measures to mitigate and eliminate the effects of transboundary damage (Principle 5(d)). Additionally, all the states concerned should also seek the assistance of competent international organizations (Principle 5(e)).

The principal examples of international agreements that rely on this approach are Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty regarding liability arising from environmental emergencies (Liability Annex) and the Nagoya-Kuala Lumpur Supplementary Protocol on Liability to the CBD (Supplementary Protocol). In utilising the same approach to liability, Annex VI and the Supplementary Protocol take on somewhat different perspectives, which are set out below.

The Antarctic Treaty System is a unique international legal regime enabling the participating states to cooperate in managing the Antarctic continent. In 1991, the states parties concluded the Protocol on Environmental Protection to the 1959 Antarctic Treaty in order to ‘enhance the protection of the Antarctic environment.’ The Protocol entered into force in 1998. The Liability Annex to the 1991 Protocol on Environmental Protection was concluded in 2005 and will enter into force once all the twenty-eight Antarctic Treaty Consultative Parties have ratified it.

The liability regime under the Liability Annex is predicated on ‘the fact that the operator, having caused an environmental emergency that may have significant and harmful impact on the Antarctic environment, did not take the required response action to avoid or minimize such impact.’ In line with the general trend towards civil liability of operators (see previous sections), the state is only liable when it itself is the operator. During negotiations, the discussion was focused on the environmental aspect of liability, the purpose being to protect the environment of the Antarctic. Although the phrase ‘environmental damage’ does not appear in

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220 This approach has also been incorporated into the 2010 UNEP Guidelines for the Development of Domestic Legislation on Liability, Response Action and Compensation for Damage Caused by Activities Dangerous to the Environment.


the final text, the Liability Annex has ‘the comprehensive protection of the Antarctic environment and dependent and associated ecosystems’ as its main objective and it has been suggested that it creates a truly environmental liability regime. In accordance with Article 5(1), each Party ‘shall require each of its operators to take prompt and effective response action to environmental emergencies,’ which is an absolute obligation of conduct insofar as state regulation of operators’ conduct is concerned. This obligation can also be qualified as a due diligence obligation of result as the response action itself is not guaranteed. If the operator fails to take such action, the state of that operator as well as other states parties are ‘encouraged’ to take response action. Parties other than the state of the operator shall not take response action to an environmental emergency unless there is an imminent threat of significant harm to the Antarctic environment. Thus, although the Liability Annex does not establish liability for damage per se, it covers both actual as well as imminent environmental impacts in obligating the operator to pay for response action, the scope of which, as has been noted, ‘is comparable to “the costs of preventive measures” recognized as one element of environmental damage.’

The Liability Annex defines response action as follows:

reasonable measures taken after an environmental emergency has occurred to avoid, minimise or contain the impact of that environmental emergency, which to that end may include clean-up in appropriate circumstances, and includes determining the extent of that emergency and its impact.

This definition encompasses clean-up after an environmental emergency has occurred but makes no mention of restoration measures, which rather limits the scope of the Annex.

The true novelty of the regime is in that it provides for the operator’s strict liability for the costs of response action that has either been taken by one of the parties or should have been taken but was not. If a non-state operator should

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225 2005 Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty (Liability Arising from Environmental Emergencies), Art. 5(2).
226 2005 Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty (Liability Arising from Environmental Emergencies), Art. 5(3)(a)-(b).
228 2005 Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty (Liability Arising from Environmental Emergencies), Art. 2(f).
229 2005 Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty (Liability Arising from Environmental Emergencies), Art. 6(1)-(2).
have taken response action but did not and no such action has been taken by any party, the operator is still liable to pay an equivalent of the costs of response action into the Article 12 fund (Art. 6(2)(b)). Along similar lines, in situations when a state operator should have taken response action but did not and neither did any other party, the state operator must pay an equivalent of the costs of response action into the Article 12 fund (Art. 6(2)(a)). Actions for compensation against non-state operators can only be brought within limited time (Art. 7(1)). Operators’ liability is limited in amount unless the environmental emergency resulted from an act or omission of the operator, committed with the intent to cause it, or recklessly and with knowledge that such an emergency would probably result (Art. 9). The operator may also invoke exemptions from liability (Art. 8).

In essence, the Liability Annex provides for the operator’s liability for environmental emergencies in the Antarctic. The Article 6 distinction between state and non-state operators merely reinforces that notion and Article 10 absolves states of liability for operators other than its state operators:

A Party shall not be liable for the failure of an operator, other than its State operators, to take response action to the extent that that Party took appropriate measures within its competence, including the adoption of laws and regulations, administrative actions and enforcement measures, to ensure compliance with this Annex.

It has been suggested that the Annex VI liability mechanism ‘breaks new ground in international environmental law’ as it in effect imposes liability for significant and harmful impact on the environment where there is no economic loss involved. It does so by requiring states to ensure that operators take prompt and effective response action that ‘may include clean-up’ in environmental emergency situations in Antarctica. Yet, Annex VI stops short of requiring restoration measures to be taken. It is also important to note that the Liability Annex does not cover damage caused to the Antarctic environment by an accumulation of injurious effects of climate change; its scope is limited to environmental emergencies.

The obligation to take response action has also provided the basis for the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the CBD adopted in Nagoya in October 2010. However, as has been mentioned, the Supplementary Protocol utilizes a different approach.


231 See 2005 Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty (Liability Arising from Environmental Emergencies), Art. 1.
The Supplementary Protocol outlines international rules and procedures in the field of liability and redress for damage resulting from transboundary movements of living modified organisms (LMOs) and will enter into force once forty states have ratified it (Arts. 1, 18(1)). The Supplementary Protocol applies to damage resulting from intentional, unintentional, and illegal transboundary movements of LMOs and obligates states to require operators to inform the competent authority, evaluate damage, and take appropriate response measures (Arts. 3, 5(1)). In turn, the competent authority shall identify the operator which has caused the damage, evaluate the damage, and determine which response measures the operator has to take (Art. 5(2)). The crucial difference of the approach adopted by the Supplementary Protocol from the one set out in the Liability Annex to the 1991 Protocol on Environmental Protection discussed above lies in its extended definition of response measures. The Supplementary Protocol defines response measures as reasonable actions to:

i. Prevent, minimize, contain, mitigate, or otherwise avoid damage, as appropriate;

ii. Restore biological diversity through actions to be undertaken in the following order of preference:
   a. Restoration of biological diversity to the condition that existed before the damage occurred, or its nearest equivalent; and where the competent authority determines this is not possible;
   b. Restoration by, inter alia, replacing the loss of biological diversity with other components of biological diversity for the same, or for another type of use either at the same or, as appropriate, at an alternative location.232

First, it encompasses prevention and minimization of harm in the event of damage caused by an incident involving transboundary movement of LMOs. Second, the Supplementary Protocol takes operators’ liability a step further and provides for restoration measures to redress the damage and to eliminate, insofar as it is possible, its consequences by bringing biodiversity to its original state or its nearest equivalent and, in case of loss of biodiversity, its replacement with other components thereof. In accordance with the Supplementary Protocol, the operator shall be required to take response measures if damage has occurred or there is a ‘sufficient likelihood’ that damage will occur (Art. 5(3)).

Like the Liability Annex, the Supplementary Protocol requires that the costs of response measures be borne by the operator. Should the operator fail to take

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response measures, the state’s competent authority may implement them (Art. 5(4)). It then has the right to recover from the operator the costs of response measures taken (Art. 5(5)). The operator’s liability is subject to the requirement of causation between the damage and the LMO and may be limited financially and in time in accordance with the domestic law of the state concerned (Arts. 4, 7, 8). The operator also has the right to invoke exemptions provided for in domestic law (Art. 6).

3.2.1.4.1 Obligation to Take Response Action and Climate Change-Related Damage

Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty and the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress impose on states an absolute obligation of result to require that operators take appropriate response measures. Unlike international agreements based on compensation-related approaches to state liability (obligation to pay compensation and obligation to ensure prompt, adequate, and effective compensation), these instruments do not focus on compensating the injured party (state or non-state), but rather require states to ensure that operators take response action aimed at the avoidance of damage following an environmental emergency, which may include clean-up (Liability Annex), or going as far as to necessitate restoration measures (Supplementary Protocol).

However, with respect to climate change-related damage, the approach based on the obligation to take response action is a conceptual misfit. This approach is directed at responding to an incident, whereas climate change-related damage is a result of a complex process involving numerous actors across time and space. Also, the obligation to take response measures is mainly directed at the consequences of environmental harm and cannot be relied upon to ensure that states take measures to mitigate climate change. As an adaptation strategy it would likely prove belated and inadequate, particularly in cases of damage associated with slow onset events. Besides, the damage that climate change is causing to the environment may not be easy to define, whereas climate change-related damage to property is not covered by the approach necessitating the taking of response measures. Similar to the approach involving the obligation to ensure prompt, adequate, and effective compensation, the duty to take response action is based on the operator’s liability, and legal difficulties associated with causation may be impossible to overcome.233

233 Conceptual unsuitability of this approach to climate change-related damage makes considerations of a legal, political, and systemic nature redundant.
3.2.1.5 Concluding Remarks on State Liability

As the above analysis has shown, the existing approaches to state liability in international law have inspired a number of international agreements in the field of liability and redress. In making states liable to pay compensation, the Space Liability Convention is a rare example and, generally, in international law there is a strong tilt towards the civil liability of operators. The Space Liability Convention provides for absolute as well as fault-based liability of states. Its application, however, is restricted: it only extends to space activities that at the time the Convention was conceived were exclusively state-operated and no involvement of the private sector appeared likely. Furthermore, under the Space Liability Convention, liability can only arise vis-à-vis other states; victims cannot claim compensation directly from the state liable under the Convention. It appears that in international law, the approach to state liability based on the obligation to pay compensation is uncommon and in any case is limited to space activities.

The relatively uncommon approach to liability embodied in the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses focuses on the obligation to negotiate a redress settlement. The difficulty with this approach is that states can neither be required to reach an agreement nor can they be compelled to refer the dispute to a third party for settlement.

Under the Principles on Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities, the liability of states is limited to situations when the state itself is the operator whereas the civil liability of operators is strict and victims are provided with direct access to an effective remedy, namely the ability to launch a compensation claim. In requiring states to ensure that operators provide prompt, adequate, and effective compensation to victims of transboundary harm, this approach is rooted in the gravity of damage hazardous activities are likely to cause in case of malfunction. In international law, the requirement to ensure prompt, adequate, and effective compensation is largely confined to regulating liability for the damage caused by activities that are considered hazardous, e.g. the use of nuclear power sources or transport of hazardous substances.

The approach to liability adopted by Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty and the Nagoya-Kuala Lumpur

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Supplementary Protocol on Liability and Redress obligates operators, including state operators, to take response action to redress damage. Response action under the Liability Annex envisages avoidance of damage, including clean-up, while the Supplementary Protocol goes further and provides for restoration measures.

It has been concluded that none of the liability models discussed above can be successfully applied to climate change-related damage. A liability mechanism imposing on states the duty to pay compensation would be an attractive option for countries suffering from the injurious consequences of climate change. However, under international law, this approach is limited to space activities associated with ultrahazardous risks, and in the case of climate change-related damage would be a politically unacceptable. Given its nature, the approach based on obligation to negotiate a redress settlement would hardly be able provide victims with any redress at all and is generally unsuitable due to the fact that multiple activities worldwide contribute to climate change. The obligation to ensure prompt, adequate, and effective compensation would be of use to climate change victims on the ground, e.g. members of coastal communities or inhabitants of low-lying islands, but it can only be invoked with regard to hazardous activities and, as such, conceptually not fitted to address climate change-related damage. It is significant that compensation claims analysed in Chapter 4 do not come within the scope of the obligation to ensure prompt adequate, and effective compensation because they have not been brought under domestic laws created pursuant to this obligation. There is nothing in the nature of the emission of GHGs \textit{per se} to suggest that this activity can be qualified as hazardous under international law; GHGs are emitted by virtually every human activity, including farming a field or driving a car, and they only become dangerous when reaching high levels of concentration in the Earth’s atmosphere. Finally, the liability regimes relying on the duty to take response measures deal with environmental damage whereas, at the end of the day, most climate change-associated harms amount to property damage. It may be argued that desertification, at least to some degree, amounts to damage to the environment \textit{per se} but in any case, subjecting states to the obligation to take response measures would be an instance of too little too late: it is unlikely that the injurious effects of climate change can be avoided and restoration may altogether be impossible. In other words, the approach based on the obligation to take response action cannot accommodate climate change-related damage due to lack of conceptual compatibility.
3.2.2 State Responsibility

During the negotiations of the 1992 UNFCCC, some states advocated including a provision reiterating the rights and obligations of states under the general law of state responsibility. Such a provision did not find its way into the final text of the Convention; however, upon signature, several small island nations made a declaration, which they perceived as necessary to preserve their rights under the law of state responsibility. In the declaration, they stated that the Convention did not prejudice the rules of international law concerning state responsibility and that none of its provisions could be interpreted as derogating from the principles of general international law.236

3.2.2.1 State Responsibility: Introduction

State responsibility as reflected in the 2001 ILC Articles on Responsibility of States for Internationally Wrongful Acts is triggered by an internationally wrongful act of a state while conventional law imposing liability on states is considered lex specialis. In accordance with the lex specialis derogat legi generali maxim, conventional liability provisions take precedence over the general law of state responsibility.237 In the absence of such provisions, the extraconventional law of state responsibility remains the only available framework for interstate liability and redress. State liability pertains to situations when lawful conduct has resulted in harm, and unless there are such primary rules providing for state liability, a state can only be held liable ex delicto, i.e. having committed an internationally wrongful act.238

The current section takes a careful look at the law of state responsibility and in so doing it generally follows the original structure of the ILC Articles. Section 3.2.2.2 on the origins of state responsibility addresses the concepts of the internationally wrongful act of a state, attributability of wrongful conduct to a particular state, and breach of an international obligation. It also gives consideration to the notion of retroactivity. Next, the various types of international obligations are distinguished: due diligence obligations as opposed to absolute obligations and obligations of

237 See also 2001 ILC Articles on Responsibility of States for Internationally Wrongful Acts, Art. 55.
conduct vs. obligations of result. Further, circumstances precluding wrongfulness are described. Section 3.2.2.3 focuses on the content of state responsibility and the legal consequences of an internationally wrongful act – cessation and reparation. Reparation for injury in general, and restitution, compensation, and satisfaction in particular, are analysed in Section 3.2.2.3.1 where the requirement of causation is given special consideration. Breaches of obligations arising under peremptory norms of general international law are examined in Section 3.2.2.3.2. Finally, Section 3.2.2.4 is devoted to questions of implementation of the international responsibility of states (including countermeasures) and considers, in particular, the issue of standing.

3.2.2.2 Origins of State Responsibility

In international law, states incur responsibility for internationally wrongful acts they commit. State responsibility is engaged when an internationally wrongful act is committed and it (a) is attributable to the state and (b) constitutes a breach of an international obligation (Art. 2). Secondary norms of international law stipulate the origin and consequences of an internationally wrongful act and also govern the implementation of state responsibility.

For there to be an internationally wrongful act of a state, the conduct consisting of an action or omission must first be attributable to that state. In order to determine whether a particular act can be attributed to the state under international law, a distinction must be made between acts of the state and those of private entities operating in the territory of that state or in areas within its jurisdiction or control. Under international law, only the acts or omissions of the state’s organs or agents can be attributed to that state; the state cannot be held responsible for the conduct of private actors simply because they may be operating within its jurisdiction or control:

The General principle drawn from State practice and international judicial decisions, is that the conduct of a person or group of persons not acting on behalf of the State is not considered as an act of the State under international law. This conclusion holds irrespective of the circumstances in which the private person acts and of the interests affected by the person’s conduct.

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In principle, the conduct of any state organ as well as that of bodies authorized to exercise or assume governmental authority is attributable to the state.\textsuperscript{241} *Ultra vires* acts of state organs (acts beyond the power granted by law) and acts by private persons directed or controlled by that state are also attributable (Articles 7, 8). For example, in the *Case Concerning Military and Paramilitary Activities in and Against Nicaragua*, the ICJ attributed responsibility to the US having used the test of effective control over the Contras relating to overflights violating Nicaraguan sovereignty.\textsuperscript{242} Conduct that may not have been attributable to the state at the time of commission but which is subsequently adopted by the state as its own is likewise attributable (Art. 11). In its *United States Diplomatic and Consular Staff in Tehran* judgment, the ICJ found that the militants’ attack on the Embassy and Consulates could not be considered ‘as in itself imputable to the Iranian State.’ The Court held, however, that Iran was in violation of its obligation under the Diplomatic and Consular Conventions to protect the premises and that the approval of the militants’ attack given by the Iranian state ‘translated continuing occupation of the Embassy and detention of the hostages into acts of that State.’\textsuperscript{243} In other words, the requirement of attributability is satisfied when an action or omission is carried out by the state – ‘a real organized entity, a legal person with full authority to act under international law,’\textsuperscript{244} which is without prejudice to the fact that the state ‘can only act by and through [its] agents and representatives.’\textsuperscript{245}

Lefeber has observed that the non-attribution of private conduct reduces the capacity of international law to protect the environment because the state cannot be held responsible for activities carried out by private persons. Yet, the law of state responsibility does not altogether exclude the possibility of the state being responsible for the injurious consequences of non-governmental activities because ‘[t]he non-attribution of private conduct is without prejudice to the existence of obligations incumbent on states to regulate and control the conduct of private persons’ in their territory and in areas within its jurisdiction or control.\textsuperscript{246} Therefore, the state’s failure to regulate and control private conduct in accordance with its international obligations, and not the private conduct itself, is attributable to that state under international law and as such has the potential of giving rise to state responsibility. For instance, it has recently been concluded by the ITLOS Seabed

\textsuperscript{241} See 2001 ILC Articles on Responsibility of States for Internationally Wrongful Acts, Arts. 4-6, 9-10.


\textsuperscript{245} *German Settlers in Poland*, Advisory Opinion, 1923 PCIJ (Ser. B) No. 6, p. 22.

\textsuperscript{246} Lefeber 1996, p. 56.
IDENTIFICATION OF LEGAL REGIMES RELEVANT TO CLIMATE CHANGE-RELATED
DAMAGE

Disputes Chamber in relation to the expression ‘to ensure’ used in international legal instruments that while it does not imply that the state can be made liable for ‘each and every violation committed by persons under its jurisdiction, it is equally not considered satisfactory to rely on mere application of the principle that the conduct of private persons or entities is not attributable to the State under international law.’\(^{247}\)

Second, in order to establish whether there has been an internationally wrongful act of a state, it is necessary to determine whether the conduct attributable to the state in question constitutes a breach of an international obligation of that state (Art. 2(b)).\(^{248}\) This is to be done by examining the relevant primary norms of international law as ‘[t]here is a breach of an international obligation by a state when an act of that state is not in conformity with what is required of it by [the particular] obligation, regardless of its origin or character’ (Art. 12). More to the point, if a primary obligation has been violated by conduct attributable to the state, that state has committed an internationally wrongful act.

According to the ILC, conduct prescribed by an international obligation may involve an act or an omission or a combination of the two; it may also involve the passage of legislation or taking of certain administrative or other measures or even a threat of such action. In every such case, if the state’s conduct is not in conformity with the conduct legally prescribed by the international obligation, there is a breach of that obligation.\(^{249}\) International obligations may originate in a treaty, customary international law or a general principle of law; state responsibility may arise from breaches of bilateral obligations, multilateral obligations, or from those owed to the international community as a whole.\(^{250}\) International obligations may be extended in time or not have a continuing character; they may consist of single or composite acts (Arts. 14, 15). Regardless of the nature or purpose of an international obligation, its breach must occur at the time when the state is bound by it, which offers a guarantee against retroactive application of international law in matters of state responsibility (Art. 13).\(^{251}\)

\(^{247}\) Responsibilities and Obligations of States with Respect to Activities in the Area, Advisory Opinion of 1 February 2011, 2011 ITLOS Rep. 10, para. 112.

\(^{248}\) Attribution of wrongful conduct to a state in international law is a concept distinctly different from attribution of harm complained of to a particular defendant in domestic law.


In order to establish whether an international obligation has been breached, it is essential to identify the exact primary norm the state is bound by, its content, and character. The ILC has recognized that some adopted classifications of international obligations may be helpful in ascertaining a breach. The two legal paradigms that may assist in this regard are: obligations of conduct vs. obligations of result and absolute obligations vs. due diligence obligations.

As far as the first binary is concerned, state responsibility is dependent on ‘the precise formulation of the duty breached, and in particular whether it requires the state to adopt a specified line of conduct or the achievement of a particular result.’ The ILC has noted that ‘a distinction is commonly drawn between obligations of conduct and obligations of result’ and that ‘[t]hat distinction may assist in ascertaining when a breach [of an international obligation] has occurred.’ This is notwithstanding the fact that the origin or character of an obligation is irrelevant when a state does not act in conformity therewith (Art. 12). Obligations of conduct, or comportment, require a state to adopt a particular course of conduct whereas obligations of result are directed at a particular outcome, irrespective of the means employed towards its achievement. An obligation of conduct is breached ‘irrespective of the occurrence of injurious consequences or of any external event;’ a state’s failure to conduct itself in a way required by an international obligation is sufficient for a finding of breach. Conversely, a state is in breach of an obligation of result when the conduct it has chosen to adopt has not led to the outcome required by the international obligation in question.

The ILC distinction between obligations of conduct and obligations of result has been helpful in classifying international obligations relating to the protection of the environment in order to facilitate the determination of their breach. Such

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obligations ultimately aim to prevent transboundary environmental interference causing significant harm, which can be described as a compound obligation, *i.e.* one comprising interrelated but distinct elements and operating within the continuum of prevention and reparation. Thus, the compound obligation requires that the source state take all procedural and substantive measures necessary to avoid, minimize, and repair transboundary environmental interference causing significant harm.257 Lefeber has suggested addressing those obligations by way of differentiating between (1) procedural obligations, (2) quantitative ecostandards, and (3) qualitative ecostandards.258 This distinction is instrumental to the analysis of international obligations pertinent to climate change in Chapter 5.

Procedural obligations can be described as obligations of conduct. Procedural obligations include obligations to assess the environmental impact of planned activities; to notify and to consult with the potentially affected states; to negotiate a redress settlement; to monitor and control on-going activities; to safeguard and monitor the sites of abandoned activities; and to ensure prompt, adequate, and effective compensation. Breach of any of these obligations is contingent on whether or not the state has adopted the prescribed course of conduct and does not depend on the achievement of the desired result – that of transboundary harm prevention.

Since quantitative ecostandards presuppose the existence of particular numeric goals to be achieved, they create obligations of result. Quantitative ecostandards notably include obligations to reduce emissions of a certain substance (*e.g.* GHGs) by a certain percentage before a certain time. If particular reduction goals are not met within the allotted time period, the wanted result is not achieved. Therefore, the obligation to reduce emissions would be breached unless it can be inferred that it is a due diligence obligation (see below).

Qualitative ecostandards appear to entail obligations of conduct. Some are relatively straightforward in prescribing requirements of particular conduct, *e.g.* obligation to use best technical means or obligation to use ecologically sound production techniques. Others are less obvious, *e.g.* obligation to take appropriate measures to prevent and abate transboundary environmental interference causing significant harm. According to Lefeber, this obligation must be characterized as that of conduct without prejudice to its ultimate objective of preventing such harm.259 The obligation to prevent and abate significant transboundary harm refers to the adoption of preventive measures and given the fact that the required course of action may vary in its degree of precision, this obligation must be seen as an obligation of conduct and as such, it is not conditional on the actual occurrence of transboundary environmental harm.

257 Lefeber 1996, p. 34.
258 Lefeber 1996, pp. 76-77.
259 Lefeber 1996, pp. 77-79.
The second distinction – that between absolute obligations and due diligence obligations – is based on the state’s efforts directed towards compliance. Obligations that require a state to take effective measures ‘of a legislative, administrative, or juridical nature to prevent legally protected interests of third states from being harmed by public or private conduct’ are due diligence obligations. They must be distinguished from absolute obligations whose breach is independent of the state’s efforts to comply with them.

The concept of due diligence has traditionally been used to alleviate the impacts of state responsibility in a number of areas of international law and has proven to be of particular relevance to the regulation of private conduct by the state so that persons within its jurisdiction or control do not harm the interests of third states. Due diligence obligations entail certain minimum standards that the state must observe in its efforts to comply with those obligations. For instance, with regard to hazardous activities involving a risk of significant transboundary harm, states are obliged to act with due diligence in allowing those activities by subjecting them to requirements of prior authorization, environmental impact assessments (EIAs), and subsequent monitoring of environmental impacts. The fact that in cases of transboundary harm arising out of hazardous activities liability attaches to the operator does not release the state from its due diligence duties of prevention.

The state’s compliance with its customary duty to prevent and abate transboundary environmental interference causing significant harm is measured against its endeavours to comply with it. States are required to take measures towards the prevention of harm; it is irrelevant whether in the end harm is prevented; what is important is that states have to exercise due diligence towards the achievement of this goal. In its Articles on Prevention of Transboundary Harm from Hazardous Activities, the ILC describes this duty as follows:

The obligation of the State of origin to take preventive or minimization measures is one of due diligence. It is the conduct of the State of origin that will determine whether the State has complied with its obligation […]. The duty of due diligence involved, however, is not to guarantee that significant harm be totally prevented, if it is not possible to do so. In that eventuality, the State of origin is required […] to exert its best possible efforts to minimize the risk. In this sense, it does not guarantee that the harm would not occur.\(^\text{262}\)

\(^{260}\) Lefeber 1996, p. 61.


In its analysis of the ‘responsibility to ensure,’ the ITLOS Seabed Disputes Chamber has captured the essence of a due diligence obligation in the following manner:

The sponsoring State’s obligation ‘to ensure’ is not an obligation to achieve, in each and every case, the result that the sponsored contractor complies with [its] obligations. Rather, it is an obligation to deploy adequate means, to exercise best possible efforts, to do the utmost, to obtain this result.\(^{263}\)

The ITLOS has characterized the obligation to ensure as a due diligence obligation of conduct noting that in international law, the notions of obligations of conduct and obligations of due diligence are connected. Shortly before, the ICJ arrived at a similar conclusion stating that ‘[a]n obligation to adopt regulatory or administrative measures […] and to enforce them is an obligation of conduct’ and calling upon the Parties ‘to exercise due diligence in acting through the Commission for the necessary measures to preserve the ecological balance of the [Uruguay] river.’\(^{264}\)

Elusive as the exact standard of due diligence may appear to be, an effective due diligence measure must be likely to lead to the wanted result. In its recent assessment of a particular treaty obligation, the ICJ has thus described an effective due diligence measure:

It is an obligation which entails not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators, to safeguard the rights of the other party.\(^{265}\)

Objectively, the required standard of care should correspond to the degree of due diligence to be expected of any ‘good government’ in a comparable situation.\(^{266}\) Since states’ circumstances are different and some states may have a limited choice of compliance means at their disposal, the subjective component of the due diligence standard too, gains relevance.\(^{267}\) This is without prejudice to the fact that

\(^{263}\) Responsibilities and Obligations of States with Respect to Activities in the Area, Advisory Opinion of 1 February 2011, 2011 ITLOS Rep. 10, para. 110.


\(^{267}\) Lefeber 1996, p. 65.
even states without a well-developed economy and human and material resources are expected to exercise vigilance and employ their infrastructure.\footnote{2001 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, ILC Report on the work of its 53rd session, A/56/10, YILC, vol. II, Part Two, commentary to Art. 3, p. 154, para. 17.} The degree of due diligence to be exercised by the state depends on the means available to that state, the nature of the interests to be protected, and the exact circumstances of the case. Additionally, the degree of due diligence is not a static concept and can change overtime either because ‘measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge’ or the degree of due diligence ‘may […] change in relation to the risks involved in the activity. […]’\footnote{Responsibilities and Obligations of States with Respect to Activities in the Area, Advisory Opinion of 1 February 2011, 2011 ITLOS Rep. 10, para. 117.} [The due diligence standard] has to be more severe for the riskier activities.\footnote{Lefeber 1996, pp. 65-66.} For instance, the degree of due diligence associated with the prevention and abatement of transboundary environmental interference causing significant harm has increased since the 1972 UN Conference on the Human Environment due to the changing socio-economic and political values.\footnote{Lefeber 1996, pp. 66-69.} Lefeber has suggested that the due diligence standard depends on the following: (1) degree of control; (2) object of control; (3) technical and economic capacity of the state concerned; and (4) the interests at stake.\footnote{Lefeber 1996, pp. 66-69.} To clarify, the state can only be required to exercise due diligence in the territory within its jurisdiction or control (including situations when it functions as the flag state for vessels, aircraft, and spacecraft outside its territory); the standard of due diligence depends on the hazardousness of the regulated activity, and the degree of due diligence depends on the protected interests as well as the technical and economic capabilities of states. Insofar as it allows for differentiation in conduct standards for different states, due diligence has been compared to the concept of common but differentiated responsibilities albeit it lacks ‘the elements of conditionality and solidarity’ of the latter.\footnote{Birnie, Boyle & Redgwell 2009, p. 149; see also Chapter 5.}

In contrast with due diligence obligations, absolute obligations are focused on the desired result rather than action and are phrased in absolute terms. The state’s efforts towards the achievement of goals specified by an absolute obligation are of no importance. If the result contemplated by an absolute obligation is not attained, even though the state may have taken steps towards compliance, it would still be in breach, \textit{i.e.} if an international obligation is absolute in character, a state’s failure to live up to the goal set by such an obligation ‘automatically entails’ breach of that obligation. Obligations of conduct, such as those on qualitative eco-standards, are
frequently phrased in absolute terms.\textsuperscript{273} For example, states may be required to prohibit certain activities, to prescribe the use of particular techniques or to ‘take appropriate measures.’ The obligation to take appropriate measures is absolute to the extent that it requires the state to regulate the conduct of private persons within its jurisdiction or control; however, insofar as it requires the state to control private conduct within its territory, the obligation must be described as one of due diligence.\textsuperscript{274}

True to their form, absolute obligations are phrased in absolute terms, \textit{e.g.} phrases like ‘shall ensure,’ ‘take effective measures to,’ ‘shall reduce,’ etc. are used.\textsuperscript{275} Notably, expressions like ‘shall endeavour’ or ‘shall avoid to the maximum extent possible’ are characteristic of due diligence obligations; conditionality is implied despite the absolute character of the modal verb. Finally, it must be mentioned that, in international law, obligations phrased in terms laxer than the unconditional ‘shall’ (\textit{e.g.} ‘should,’ ‘may,’ etc., with the exception of ‘may not’) are not considered to be of a compulsory character.

Having considered the distinction between obligations of conduct and obligations of result and having compared due diligence obligations with absolute obligations, it is important to reiterate that correct identification of an international obligation across the two binaries may be helpful, and at times is vital, for the determination of breach of that obligation.

In the international law of state responsibility, a limited number of circumstances may preclude the wrongfulness of conduct that would otherwise violate the international obligations of the state concerned. Circumstances precluding wrongfulness do not annul the obligation but rather provide an excuse for temporary non-performance while those circumstances subsist. They largely operate like defences in domestic legal systems and must be distinguished from questions of the jurisdiction of a court or tribunal over a dispute or issues relating to the admissibility of a claim.\textsuperscript{276} Circumstances precluding wrongfulness are: consent

\textsuperscript{273} See \textit{e.g.} Section 3.2.1.4 for analysis of state obligations under the 2005 Liability Annex to the 1991 Protocol on Environmental Protection to the 1959 Antarctic Treaty.

\textsuperscript{274} Lefeber 1996, pp. 69-72.


(Art. 20), self-defence (Art. 21), countermeasures (Art. 22), force majeure (Art. 23), distress (Art. 24), and necessity (Art. 25).

First, a state’s consent to the commission of a particular act by another state precludes that act’s wrongfulness to the extent, and for the duration, of the former state’s consent. Second, if the act of a state constitutes a lawful measure of self-defence in line with the UN Charter, its wrongfulness is likewise precluded. Third, to the extent that the act of a state constitutes a countermeasure taken against a state responsible for an internationally wrongful act, its wrongfulness is also precluded. Countermeasures are measures that involve the non-performance of international obligations. Countermeasures can only be taken in response to non-performance of an international obligation by another state and only in a way that allows for the resumption of performance of the obligation in question (Arts. 49(2) and 49(3)). A number of fundamental international obligations cannot be affected by countermeasures, namely the obligation to refrain from the threat or use of force, human rights obligations, humanitarian legal obligations prohibiting reprisals, and other obligations under peremptory norms of international law (Art. 50(1)). Countermeasures must be commensurate with the injury suffered and shall be terminated as soon as the responsible state has complied with its international obligations (Arts. 51-53). The fourth circumstance precluding wrongfulness is force majeure, i.e. the occurrence of an irresistible force or an unforeseen event beyond the control of a state making it materially impossible for that state to perform its obligation (Art. 23). However, force majeure does not extend to circumstances that merely make performance of an obligation more difficult. Fifth, distress precludes wrongfulness if the author of the act in question has no other reasonable way, in a situation of distress, of saving the author’s life or the lives of those in the author’s care. Distress or force majeure cannot be relied upon if it is wholly or in part caused by the state invoking it and if the act in question is likely to cause a comparable or greater peril. The sixth and final circumstance precluding wrongfulness is necessity. The ILC Articles provide a narrow definition of necessity formulated partially in negative terms to highlight the strict limitations safeguarding it against possible abuse. Necessity may not be invoked unless the act in question is the only way for the state to safeguard an essential interest against a grave and imminent peril (Art. 25(1)(a)); it may not be invoked unless the act ‘does not seriously impair an essential interest of the State or States towards which the obligation exists, or of the international community as a whole’ (Art. 25(1)(b)). Additionally, necessity may not be relied upon as a ground for precluding wrongfulness if the obligation in question excludes such possibility or if the state invoking it has contributed to the situation of necessity (Art. 25). Necessity is

different from consent, self-defence and countermeasures in that it is not dependent on the prior conduct of the injured state. It differs from \textit{force majeure} because it does not involve conduct which is involuntary or coerced. Unlike distress that consists in danger to the state official’s life or the lives of those in the official’s care, necessity is used in situations of grave danger either to an essential interest of the state or the international community as a whole.\textsuperscript{278} Although necessity is an available ground to preclude wrongfulness, it is subject to very strict limitations and can only be used in rare cases.

3.2.2.3 \textbf{Content of State Responsibility}

The current section on the content of the international responsibility of states provides insight into the legal relationship the responsible state enters upon commission of an internationally wrongful act. Under the law of state responsibility, an internationally wrongful act of a state entails particular legal consequences (Art. 28). Having committed an internationally wrongful act, the responsible state may not rely on its domestic law as justification for not complying with its international obligations under the law of state responsibility (Art. 32). The core consequences of an internationally wrongful act involve cessation of the wrongful act and full reparation for the injury caused. Reparation may take the form of restitution, compensation and satisfaction (Art. 34). The legal consequences of an internationally wrongful act do not absolve the responsible state from the duty to perform the obligation breached (Art. 29). Even if the state has made full reparation for the injury caused, its continued duty of performance remains unaffected should the breached obligation continue to exist.

Legal consequences of state responsibility include cessation of an internationally wrongful act, which is the primary requirement in eliminating the consequences of wrongful conduct. At the outset, the state responsible for the commission of an internationally wrongful act is obligated to cease that act and offer appropriate assurances and guarantees of non-repetition depending on the specific circumstances of the case (Art. 30). Whether an internationally wrongful act concerns an act or an omission, the function of cessation remains the same: ‘to put an end to a violation of international law and to safeguard the continuing validity and effectiveness of the underlying primary rule.’\textsuperscript{279}


The second general obligation of the state responsible for an internationally wrongful conduct is closely connected to the concept of cessation and requires the state to make full reparation for the injury caused by its wrongful conduct. Injury in this case may include material or moral damage alike (Art. 31(2)). The essence of the obligation to make reparation is aptly reflected in the Permanent Court of International Justice (PCIJ) Factory at Chorzów judgment on the merits:

The essential principle contained in the actual notion of an illegal act [...] is that reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if the act had not been committed.  

In other words, the function of reparation is to re-establish the situation altered by the breach. In its Articles on State Responsibility, the ILC has used the notion of injury in a broad way to include, inter alia, harm to the environment resulting from emissions exceeding the prescribed limit although such damage may admittedly be distant, contingent or uncertain.

The obligation to make full reparation arises only if there is a causal link between the internationally wrongful act and the injury. The ILC has referred to a range of terms that have been used to describe this link:

reference may be made to losses attributable to the wrongful act as a proximate cause, or to damage which is too indirect, remote, and uncertain to be appraised, or to any direct loss, damage including environmental damage and the depletion of natural resources or injury to foreign Governments, nationals and corporations as a result of the wrongful act.

The existence of a causal link between the wrongful act and injury is a necessary condition for reparation. However, reparation will not address injury that is too remote or consequential. Among the criteria suitable for defining the causal link, the ILC has listed directness, foreseeability, proximity, whether or not harm was deliberately caused or whether the harm caused was within the ambit of the rule breached.

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280 Factory at Chorzów (Germany v. Poland), Merits, Judgment 1928 PCIJ (Ser. A) No.17, p. 47.
3.2.2.3.1 Reparation for Injury

Reparation for the injury caused by an internationally wrongful act can take the form of restitution, compensation, satisfaction or a combination thereof (Art. 34). It is essential to emphasize once again the necessity of the causal link between the internationally wrongful act of the responsible state and the injury suffered by the affected state.

The primary form of reparation is restitution. It is closely related to the concept of cessation of internationally wrongful conduct and in practice the two may sometimes be difficult to distinguish. The main difference lies in the proportionality requirements, which restitution is subject to while cessation is not. A state responsible for an internationally wrongful act is under the obligation to make restitution, i.e. to re-establish the situation which existed before the wrongful act was committed provided and to the extent that restitution is not materially impossible and that it does not involve a burden disproportionate to the benefit deriving from restitution instead of compensation (Art. 35). In calling for the re-establishment of the status quo ante that existed prior to the commission of the internationally wrongful act ‘to the extent that any changes that have occurred in that situation may be traced to that act,’ restitution is conditional on the finding of a causal link between the wrongful act and the changes in the situation.

The second form of reparation for injury is compensation. ‘It is a well-established rule of international law that an injured State is entitled to obtain compensation from the State which has committed an internationally wrongful act for the damage caused by it’ if such damage is not made good by restitution. Whereas the function of restitution is factual re-establishment of the situation that existed prior to the commission of an internationally wrongful act, compensation aims to re-establish the situation legally. The purpose of compensation is to cover any financially assessable damage including loss of profits insofar as it is established (Art. 36(2)). Despite the legal primacy of restitution, compensation is the most frequently sought form of reparation. Compensation focuses on the material damage incurred as a result of an internationally wrongful act and, like any form of

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reparation, is dependent on the existence of a causal link between such damage and wrongful conduct preceding it. Compensation is particularly effective in situations when restitution is inadequate or unavailable and at times the injured state would simply prefer compensation to any other form of reparation. The hierarchical relationship between restitution and compensation, including the ways of determining the amount of the latter, has been described by the PCIJ:

[r]estitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it – such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.\(^287\)

Compensation has been negotiated by states following attacks on diplomatic missions, injury to embassy personnel, and in cases of damage caused to public property and infrastructure. It is also frequently resorted to outside the state responsibility context; like with the Cosmos 954 satellite incident described earlier in the section on state liability, many of such payments have been made without any admission of responsibility on an \textit{ex gratia} basis.\(^288\) In an environmental context, the Trail Smelter case provides an example whereby the arbitral tribunal awarded compensation for a ‘reduction in the value’ of the impacted land.\(^289\)

Environmental damage is likewise compensable although, admittedly, it may be difficult to quantify. Environmental damage refers to an adverse or negative effect on the environment that is ‘measurable taking into account scientifically established baselines recognized by a public authority’ and is significant.\(^290\) Significance of environmental damage may be determined on the basis of factors, such as (a) long-term or permanent change, to be understood as change that will not be redressed through natural recovery within an reasonable period of time; (b) extent of the qualitative or quantitative changes that adversely or negatively affect the environment; (c) reduction or loss of the ability of the environment to provide goods and services, either of a permanent nature or on a temporary basis; (d) extent

\(^{287}\) \textit{Factory at Chorzów (Germany v. Poland)}, Merits, Judgment 1928 PCIJ (Ser. A) No.17, p. 47.


\(^{289}\) Trail Smelter case (United States v. Canada), 16 April 1938 and 11 March 1941, UNRIAA, vol. III 1905, at 1928.

of any adverse or negative effect/impact on human health; or (e) aesthetic, scientific, and recreational value of parks, wilderness areas, and other lands.291

The United Nations Claims Commission (UNCC), responsible for the settlement of claims for damage resulting from Iraq’s unlawful invasion and occupation of Kuwait in 1990 and 1991, has awarded compensation for environmental damage in a number of claims. Pursuant to UN Security Council Resolution 687 (1991),

Iraq […] is liable under international law for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq’s unlawful invasion and occupation of Kuwait.292

In the period from 2001 until 2005, the UNCC has dealt with five instalments of claims relating to environmental damage and the depletion of natural resources. Pursuant to Decision No. 7 of the UNCC Governing Council, direct environmental damage and depletion of natural resources include: losses or expenses resulting from reasonable monitoring and assessment of the environmental damage for the purposes of evaluating and abating the harm and restoring the environment; reasonable monitoring of public health and performing of medical screenings for the purposes of investigation and combating increased health risks as a result of environmental damage; losses or expenses resulting from the abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil in coastal and international waters; reasonable measures to clean up and restore the environment; and the depletion of natural resources.293 Provided that the causal link to Iraq’s invasion and occupation of Kuwait was not merely tenuous, that the chain of causation was uninterrupted, and that the evidentiary challenges were met, the UNCC awarded compensation to the claimant states, albeit in amounts less than originally sought.294

292 SC Res. 687 (8 April 1991), para. 16.
Although the ILC has admitted that oftentimes environmental damage goes beyond harm that is easily quantifiable (see the definition of ‘environmental damage’ above), e.g. damage to biological diversity, such ‘non-use values’ are nonetheless real and compensable. Thus, difficulties associated with the quantification of damage do not, in and of themselves, excuse the responsible state from the obligation to compensate the injured state insofar as full reparation is not achieved by restitution.

The third form of reparation is satisfaction. While the other two forms of reparation take precedence, the responsible state is under the obligation to give satisfaction for the injury caused insofar as it cannot be made good by restitution or compensation. Like restitution and compensation, satisfaction is subject to the requirement of causation. Satisfaction may consist in an acknowledgement of the breach, an expression of regret, a formal apology or another appropriate modality and shall not be disproportionate to the injury (Art. 37). Unlike compensation, satisfaction is meant to address non-material injury and is known for its ‘rather exceptional character’ as it provides a remedy for injuries that cannot be assessed financially. Those injuries have been said to be ‘of a symbolic character, arising from the very fact of the breach of the obligation, irrespective of its material consequences for the State concerned.’

Article 37 does not provide an exhaustive list of satisfaction modalities; the appropriate form of satisfaction depends on the circumstances of the particular case. Assurances and guarantees of non-repetition may amount to a form of satisfaction. When the state has suffered a non-material or moral injury, a declaration of wrongfulness of the act in question can be made by a competent


Identify the legal regimes relevant to climate change-related damage

The ICJ made a declaration of wrongfulness of the actions of the British Navy in its landmark *Corfu Channel* judgment, which was deemed to provide reparation in the form of satisfaction. The Court ruled that ‘to ensure respect of international law, of which it is the organ, the Court must declare that the action of the British Navy constituted a violation of Albanian sovereignty.’\(^{300}\) The Court made this declaration as per Albania’s request deeming it appropriate satisfaction in itself. In the operative part of the judgment, the Court unanimously stated:

> The Court […] gives judgment that by reason of the acts of the British Navy in Albanian waters in the course of the Operation of November 12th and 13th, 1946, the United Kingdom violated the sovereignty of the People’s Republic of Albania, and that this declaration by the Court constitutes in itself appropriate satisfaction.\(^{301}\)

Notably, while the *Corfu Channel* declaration was in itself a form of satisfaction and the only remedy obtained, any competent court would normally determine the legality of a state’s act and make a preliminary declaration of lawfulness that may or may not be a form of reparation.

### 3.2.2.3.2 Serious Breaches of Obligations under Peremptory Norms of International Law

A peremptory norm of international law is one which is ‘accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character.’\(^{302}\) In its identification of peremptory norms, the 1969 Vienna Convention on the Law of Treaties requires that (1) such a norm should meet all of the criteria for recognition as a norm of general international law and (2) that it should be recognized as a norm from which no derogation is permitted by the international community as a whole. Albeit fairly few peremptory norms have been recognized by various national and international tribunals, the concept of *ius cogens* is not confined to the context of treaty validity.\(^{303}\) The

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\(^{300}\) *Corfu Channel (United Kingdom of Great Britain and Northern Ireland v. Albania)*, Judgment of 9 April 1949, ICJ Rep.4, at 35.

\(^{301}\) *Corfu Channel (United Kingdom of Great Britain and Northern Ireland v. Albania)*, Judgment of 9 April 1949, ICJ Rep.4, at 36, emphasis added.


peremptory norms of general international law that enjoy clear recognition by the international community of states include the prohibitions of slavery, aggression, genocide, torture, racial discrimination, and crimes against humanity as well as the right to self-determination.\textsuperscript{304} This list, however, is not exhaustive as new peremptory norms may come into existence through the process of their acceptance and recognition by the international community as a whole.\textsuperscript{305}

Under the law of state responsibility, serious breaches of obligations arising under peremptory norms of general international law entail particular consequences specific for such breaches. Should such a breach occur, states are required to cooperate to bring it to an end through lawful means and no state shall render assistance in maintaining a situation of breach. Consequences resulting from serious breaches of obligations arising under peremptory norms of international law are without prejudice to legal consequences of an internationally wrongful act described earlier (Arts. 40 and 41).

3.2.2.4 Implementation of International Responsibility of States

International responsibility of a state arises independently of its invocation by another state; it is only conditional on the occurrence of an internationally wrongful act which, in turn, rests on the two prongs of attributability and breach of an international obligation.\textsuperscript{306} Under the law of state responsibility, an internationally wrongful act of a state gives rise to the secondary obligations of cessation and reparation. The ILC provisions on implementation of state responsibility specify what action may be taken by other states to ensure that the responsible state complies with its obligations of cessation and reparation. Implementation of state responsibility determines what states have standing to invoke the international responsibility of the responsible state and what modalities such invocation may be expressed in. The invocation of state responsibility is based on the notion of the injured state – ‘the State whose individual right has been denied or impaired by the internationally wrongful act or which has otherwise been particularly affected by that act.’\textsuperscript{307} However, the ILC Articles recognize that there may be a broader range of states having a legal interest in invoking state responsibility and securing the

\textsuperscript{306} 2001 ILC Articles on Responsibility of States for Internationally Wrongful Acts, Arts. 1 and 2; see also Section 3.2.2.2.
performance of the obligation in question. Yet, in principle, the right of invocation of state responsibility is limited to situations when such a right is specifically conferred by a treaty or, in the alternative, the state invoking it must be considered an injured state or be specially affected by the breach. First and foremost, an injured state can invoke the responsibility of another state if the obligation breached is owed to that state individually. It can also invoke the responsibility if the obligation in question is owed to a group of states including that state or to the international community as a whole if the breach (a) specially affects that state or (b) ‘is of such a character as radically to change the position of all the other States to which the obligation is owed with respect to the further performance of the obligation’ (Art. 42).

Obligations owed to an injured state individually can be described as individual obligations. Obligations that are not owed to a particular state individually but rather apply between more than two states are collective obligations. Examples of obligations owed to an injured state individually include obligations under bilateral treaties and obligations under multilateral treaties or customary international law owed to one particular state. As opposed to individual obligations, collective obligations may be owed to a group of states or to the entire international community, and to invoke responsibility, an injured state would have to be specifically affected by the violation of such an obligation. An example of a violation of an international obligation owed to a group of states but specially affecting one or a small number of states is pollution of the high seas in contravention of the 1982 UN Convention on the Law of the Sea (UNCLOS).\(^\text{308}\) The UNCLOS requires states to take measures to prevent, reduce, and control pollution of the marine environment. As a result of breach of this obligation, a limited number of states may be particularly affected in that their beaches may be polluted or their coastal fisheries may be harmed by the toxic residues. Those states would then be considered injured and would be entitled to invoke state responsibility notwithstanding the fact that all states parties to the UNCLOS have an interest in the preservation of the marine environment. Collective obligations, the breach of which affects every state to which the obligation is owed, constitute a special category of obligations. In such situations, all states are individually entitled to react to a breach and invoke responsibility. For example, all states participating in the Antarctic Treaty would be injured if one state party were to claim sovereignty over an unclaimed area in Antarctica and as such, they would all be

entitled to invoke state responsibility and demand cessation and reparation.\textsuperscript{309} Consequently, obligations arising from the commission of an internationally wrongful act, \textit{i.e.} those of cessation and reparation, may likewise be owed by the responsible state to another state, to several states or, in principle, to the international community as a whole (Arts. 32, 33).

In order for the injured state to invoke the responsibility of another state, it must notify the responsible state of its claim. In its claim, the injured state may specify what action the responsible state should take to cease its wrongful conduct. It may also elect the form of reparation it would consider suitable to remedy the situation in question (Art. 43). Any claim must be brought in accordance with the nationality of claims rule and local remedies must be exhausted if the claim in question is subject to such rules (Art. 44). However, if the local remedy does not offer any possibility of redress, for instance when it is apparent that the laws the local court would apply would lead to the rejection of any appeal, the exhaustion of local remedies ceases to be a requirement; only ‘available and effective’ local remedies have to be exhausted. It has also been suggested that local remedies do not need to be exhausted where there was no relevant connection between the injured person and the State alleged to be responsible at the date of the injury.\textsuperscript{310} This exception applies to situations when local remedies are available and might even be potentially effective but ‘it would be unreasonable or cause great hardship to the injured alien to exhaust local remedies.’\textsuperscript{311} Arguably, where there is no voluntary link or territorial connection between the injured individual and the responsible state, such as in the cases of transboundary environmental harm, there is no need to exhaust local remedies.\textsuperscript{312} This has not yet crystallized into a clear rule; however, cases, in which local remedies were ‘dispensed with’ in the absence of a voluntary link, afford support to the exception to the local remedies rule.\textsuperscript{313}

The invocation of responsibility by the injured state is also subject to some exceptions. The injured state may not invoke the responsibility of another state (a) if it has waived the breach itself or its consequences or (b) where it can be inferred from its conduct that the injured state has validly acquiesced in the lapse of the claim (Art. 45).


\textsuperscript{310} Diplomatic Protection, GA Res. 62/67 (8 January 2008), Art. 15(c).

\textsuperscript{311} 2006 Articles on Diplomatic Protection, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, commentary to Art. 15(c), para. 7.

\textsuperscript{312} 2006 Articles on Diplomatic Protection, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, commentary to Art. 15(c), paras 7-8.

\textsuperscript{313} Trail Smelter case (United States v. Canada), 16 April 1938 and 11 March 1941, UNRIAA, vol. III 1905; see also 2006 Articles on Diplomatic Protection, ILC Report on the work of its 58th session, A/61/10, forthcoming in YILC, commentary to Art. 15(c), para. 9.
If several states are injured by the same internationally wrongful act, each one of those states may separately invoke the responsibility of the state which has committed the wrongful act (Art. 46). In the ILC Articles on State Responsibility, the possibility of plurality of injured states is matched by the possibility of plurality of responsible states: in situations where several states are responsible for the same internationally wrongful act, the responsibility of each one of those states may be invoked (Art. 47). According to the principle of independent responsibility upon which the ILC’s Articles are predicated, in cases of a plurality of responsible states, each state is separately responsible for the conduct attributable to it and its responsibility is not diminished or reduced by the fact that other states are responsible for the same act. State responsibility is determined on the basis of an internationally wrongful act contingent on the breach of a primary norm of international law and ‘the responsibility of each […] State is determined individually, on the basis of its own conduct and by reference to its own international obligations.’

While it is true that the state invoking responsibility is usually the injured state, there are particular instances when a state other than the injured state is also entitled to invoke it. It may do so if (1) the obligation breached is owed to a group of states including that state, and is established for the protection of a collective interest of the group; or (2) the obligation breached is owed to the international community as a whole (Art. 48). The first situation concerns collective obligations subject to a further requirement of a collective interest. Such obligations may relate to the environment or security of the region; they may derive from multilateral treaties or customary international law and have sometimes been referred to as ‘obligations erga omnes partes.’

The second situation refers to obligations that are owed to the international community as a whole and all states have a legal interest in compliance. In its *Barcelona Traction* judgment, the ICJ has characterized such obligations as follows:

> An essential distinction should be drawn between the obligations of a State towards the international community as a whole, and those arising vis-à-vis another State in the field of diplomatic protection. By their very nature the former are the concern of all States. In view of the importance of the rights involved, all states can be held to have a legal interest in their protection; they are obligations erga omnes.

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Although no *erga omnes* obligation was at stake in the *Barcelona Traction* case, the above statement indicates that in the field of state responsibility, certain obligations are owed to the international community as a whole and that all states have a legal interest in the protection of such obligations.\(^{317}\) Each state by virtue of being a member of the international community is entitled to invoke the responsibility of another state for breaches of obligations *erga omnes*.

In practice, it is often the case that obligations under peremptory norms of general international law and obligations *erga omnes* overlap. Yet, while the former focus on the scope and priority to be given to certain fundamental obligations, the latter focus on the legal interest of all states in compliance. Although all peremptory norms are obligations *erga omnes*, the reverse is not true. In this regard, the ILC has made two important points. Firstly, serious breaches of obligations arising under peremptory norms of international law can generate additional consequences not only for the responsible state but for the international community as a whole (see Section 3.2.2.2). Secondly, all states can invoke responsibility for breaches of obligations owed to the international community as a whole.\(^{318}\)

To recap, in order to have standing to invoke the international responsibility of another state, the invoking state must establish injury. There are situations when a state other than the injured state also has the right to invoke state responsibility. It can do so when the obligation breached is established for the protection of a collective interest of, and is owed to, a group of states including that state; and when the obligation breached is owed to the international community as a whole. States invoking responsibility under Article 48 may claim a declaratory remedy and cessation. Reparation may also be sought in the interest of the injured state or of other beneficiaries of the obligation breached. Thus, for breaches of obligations owed to the international community as a whole, all states have the right to invoke state responsibility and may claim cessation of the internationally wrongful act as well as reparation.\(^ {319} \)

### 3.2.2.4.1 Countermeasures

Countermeasures are measures taken by an injured state that, if not taken in response to an internationally wrongful act to obtain cessation and reparation,
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would be considered contrary to the international obligations of that state. With respect to the origins of state responsibility, the ILC lists countermeasures as one of the circumstances precluding wrongfulness (Art. 22; see also Section 3.2.2.2). Countermeasures are subject to a number of important conditions and limitations because, as unilateral measures, they must be protected against possible abuse. First, countermeasures must be ‘non-forcible’ and must not deviate from certain basic obligations, i.e. they shall not affect the obligation to refrain from the use of force; obligations protecting the fundamental human rights; obligations prohibiting reprisals; and other obligations under peremptory norms of international law (Art. 50(1)). Second, countermeasures may only be taken against the responsible state and may not be directed at third parties (Arts. 49(1), 49(2)). Third, an injured state may only take countermeasures against the state responsible for an internationally wrongful act in order to induce it to comply with its international obligations, i.e. countermeasures may not be resorted to in order to punish the responsible state (Arts. 49(1), 51). Fourth, countermeasures are temporary and must be terminated as soon as the responsible state has achieved compliance (Arts. 49(2), 49(3) and 53). Fifth, they shall, as far as possible, be taken in a way that would permit the responsible state to resume the performance of the international obligation breached (Art. 49(3)). Sixth, countermeasures must, to the extent possible, be reversible in their effects (Arts. 49(2), 49(3) and 53). Seventh, countermeasures are subject to the requirement of proportionality (Art. 51). Countermeasures that are not commensurate with the injury suffered are not lawful and can give rise to state responsibility. For example, in the Gabčíkovo-Nagymaros Project case, the ICJ has extensively addressed the question of proportionality of countermeasures and ruled that ‘the diversion of the Danube carried out by Czechoslovakia was not a lawful countermeasure because it was not proportionate’ as it deprived Hungary of its right to an equitable and reasonable share of the Danube’s natural resources.

Procedurally, when resorting to countermeasures, an injured state must fulfil a number of conditions: it shall call upon the responsible state to fulfil its obligations, notify it of any decision to take countermeasures, and offer to negotiate (Art. 52(1)). If an internationally wrongful act has ceased or if the dispute has been submitted to a competent court or tribunal and the dispute settlement procedure is being implemented in good faith, the taking of countermeasures is unjustified (Arts. 52(3), 53(4)).

Although there have been some instances when states have taken economic sanctions and other measures with respect to alleged breached of obligations

referred to in Article 48 without claiming to be injured,\textsuperscript{322} in principle, states that have standing to invoke responsibility under Article 48 may not take countermeasures in the collective interest.\textsuperscript{323}

Alternatively, economic sanctions may be justified as retortions – unfriendly, but otherwise lawful acts, – which would only be in violation of international law if the state is bound by a treaty prohibiting such actions.

3.3 Concluding Remarks

In this chapter, the fundamental difference between state responsibility and state liability has been discussed and the various approaches to the latter have been singled out. The distinctions made point to a certain degree of fragmentation in the field of interstate liability. Whereas it has been concluded that state liability is of little utility in the climate change context, a detailed overview of the law of state responsibility appears to warrant further analysis. In order to evaluate whether the law of state responsibility can provide a legal framework for the accountability of states for climate change-related damage, Chapter 5 identifies primary obligations relating to climate change and analyses the practical application of the secondary rules of state responsibility in the international climate policy context. Prior to that, given the absence of international jurisprudence on interstate liability for climate change-related damage, Chapter 4 examines a range of climate change legal actions launched in various national jurisdictions in order to provide a basis for the identification of general principles of law. In so doing, Chapter 4 identifies and analyses the legal hurdles associated with the climate change phenomenon owing to its complexity and relatively limited exposure to adjudicative scrutiny.

\textsuperscript{322} Inter alia, the ILC mentions the following examples: United States-Uganda (1978) when the US adopted legislation prohibiting exports and imports from Uganda to dissociate itself from the latter due to alleged genocide carried out by the Ugandan government; Certain Western Countries-Poland and the Soviet Union (1981) when Aeroflot’s and LOT’s landing rights were suspended by the US, Great Britain, France, the Netherlands, Switzerland, and Austria in response to Poland’s imposition of martial law, suppression of demonstrations, and subsequent detention of dissidents; and Collective measures against the Federal Republic of Yugoslavia (1998) when in response to the humanitarian crisis in Kosovo the Member States of the European Community adopted legislation freezing the Yugoslav funds and providing for an immediate flight ban.