

## Part III

# Implementation

## Implementation: traditional approaches

### 8.1 Introduction

In the preceding chapters, we have discussed the substantive regulation of environmental problems at the international level. In particular, we have analysed the obligations imposed on States in fields such as the protection of the marine environment, the atmosphere and wildlife as well as the control of dangerous substances and activities. We now turn to the processes through which these obligations are implemented.

The traditional approach in this area assumed that compliance with international obligations only depended upon a State's will to comply. From a substantive law perspective, the main mechanism to encourage compliance was to make any violation costly for the State, notably through the application of secondary norms of State responsibility.<sup>1</sup> From a procedural standpoint, breaching a norm could have several consequences, ranging from the first allegations of non-compliance, often followed by negotiations and consultations between the States concerned, to judicial mechanisms of dispute settlement and, where appropriate, alternative dispute settlement, such as mediation, conciliation or inquiry.<sup>2</sup>

The transition from compliance to non-compliance with the requirements of a norm is however better understood as a process, which admits degrees. Such degrees provide a useful basis for the discussion in this chapter because they help to locate the different implementation mechanisms at the stage where they are most likely to intervene. Four 'stages' may be distinguished along the compliance axis.<sup>3</sup> Figure 8.1 summarises this understanding graphically.

<sup>1</sup> States may also adopt countermeasures, although this is infrequent. See Responsibility of States for Internationally Wrongful Acts, GA Res. 56/83, UN Doc. A/RES/56/83, 12 December 2001 ('ILC Articles'), Art. 22 and Arts. 49-54.

<sup>2</sup> Article 33 of the UN Charter, 24 October 1945, 1 UNTS 16, shows the range of traditional methods for the peaceful settlement of disputes between States. See J. Merrills, *International Dispute Settlement* (Cambridge University Press, 2011).

<sup>3</sup> See P.-M. Dupuy, 'Où en est le droit international de l'environnement à la fin du siècle?' (1997) *Revue générale de droit international public* 873 in particular 893-95; J. E. Viñuales, 'Managing Abidance by Standards for the Protection of the Environment', in A. Cassese (ed.), *Realizing Utopia* (Oxford University Press, 2012), pp. 326-39.

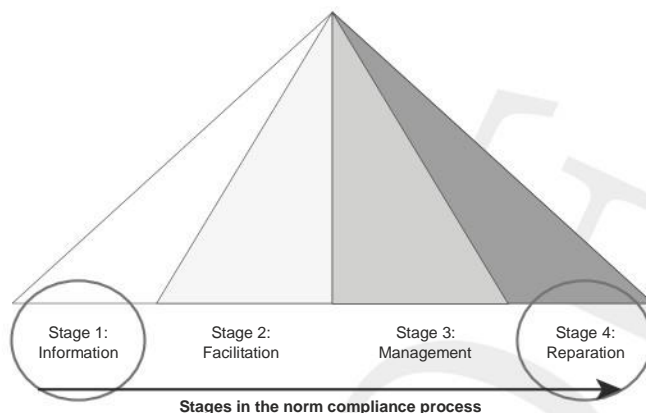


Figure 8.1: Stages in the compliance process

Some mechanisms only play a role ‘upstream’ before allegations of non-compliance emerge (Stage 1). The main mechanism at this stage is the reporting and communication of information showing a State’s behaviour in relation to its international obligations (8.2). By contrast, ‘downstream’ (Stage 4), we find the more formal mechanisms for the characterisation of a breach by third parties (arbitration and permanent courts) and the determination of the ensuing consequences attached by the law of State responsibility (8.3). Between these two extremes lies a grey area where the level of compliance is unclear. This area has traditionally been the preserve of so-called diplomatic or political mechanisms for the peaceful settlement of disputes. We will see, however, in Chapter 9, that in international environmental law, this area has been populated by new methods of facilitating compliance (Stage 2) and managing non-compliance (Stage 3) with environmental standards.

## 8.2 Monitoring and reporting

### 8.2.1 Types of obligations

A series of mechanisms can be utilised to seek compliance with environmental obligations. In this section, we analyse a technique that plays a role upstream of the breach of an obligation, namely the collection of information (monitoring) and the submission of reports in relation to the implementation of an obligation (reporting). To understand how this mechanism works, it is useful to look first at the types of obligations to be implemented.

A first distinction, which we will explore in more depth later in this chapter, can be made between ‘primary norms’ and ‘secondary norms’. Primary norms prescribe specific behaviour to be adopted by States (e.g. to reduce the emissions of certain substances, establish protected areas, communicate reports, etc.) or define conditions that, if met, trigger certain legal consequences. On

the other hand, secondary norms spell out the consequences attached to a breach or, more specifically, to the fulfilment of the conditions set by a primary norm ('reparation' in a broad sense). We will see in Section 8.3 of this chapter that the distinction is much more complex than it may appear.

Within primary norms, a further distinction can be made between 'substantive obligations' and 'procedural obligations'. The first category covers various types of obligations. An example is the duty to prevent environmental damage, which is enshrined in both customary<sup>4</sup> and treaty law.<sup>5</sup> Other examples include treaty obligations to reduce emissions<sup>6</sup> or to control the transboundary movement of certain substances.<sup>7</sup> These substantive obligations reflect the intuitive idea that there is an inter-State or 'horizontal' obligation. However, the first category also includes another type of obligation that is important in international environmental law, namely a 'vertical' obligation assumed by a State to adopt domestic measures implementing the provisions of a treaty. Vertical obligations organise the implementation of horizontal obligations. Examples include the obligation to take domestic measures to implement the international trade regulation of species or substances or to adopt national plans for the conservation of biodiversity.<sup>8</sup>

As to the category of procedural obligations, they in turn contribute to the implementation of vertical substantive obligations. Indeed, their main objective is to encourage States not only to take national measures and to communicate these, but also to establish institutions to collect the necessary information<sup>9</sup> and, thereby, to lay the foundations for the creation of a sufficient database for monitoring the evolution of the environmental problem that the regulation is intended to control. As such, these procedural requirements are at the origin of mechanisms for information gathering and reporting.

<sup>4</sup> See *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, ICJ Reports 1996, p. 226 ('*Legality of Nuclear Weapons*'), para. 29.

<sup>5</sup> See United Nations Convention on the Law of the Sea, 10 December 1982, 1833 UNTS 3 ('UNCLOS'), Art. 194.

<sup>6</sup> See e.g. the Montreal Protocol on Substances that Deplete the Ozone Layer, 16 September 1987, 1522 UNTS 29 ('Montreal Protocol'), Arts. 2 to 21 and Annexes A, B, C and E; Kyoto Protocol to the United Nations Framework Convention on Climate Change, 11 December 1997, 2302 UNTS 148 ('Kyoto Protocol'), Art. 3 and Annex B; Stockholm Convention on Persistent Organic Pollutants, 22 May 2001, 2256 UNTS 119 ('Stockholm Convention' or 'POP Convention'), Art. 3(1).

<sup>7</sup> See Convention on International Trade in Endangered Species of Wild Fauna and Flora, 3 March 1973, 993 UNTS 243 ('CITES'), Arts. III-IV; Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 22 March 1989, 1673 UNTS 57 ('Basel Convention'), Arts. 4 and 6; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 10 September 1998, 2244 UNTS 337 ('PIC Convention'), Arts. 10 and 11; POP Convention, *supra* n. 6, Art. 3(2).

<sup>8</sup> See Convention on Biological Diversity, 5 June 1992, 1760 UNTS 79 ('CBD'), Art. 6.

<sup>9</sup> See CITES, *supra* n. 7, Art. VIII(1).

### 8.2.2 Types of mechanisms

In general, environmental treaties provide mechanisms for gathering information and reporting on the implementation of obligations.<sup>10</sup> In the context of this book, rather than conduct an individual analysis of the numerous treaties, we will focus on identifying the types of mechanisms used in practice. In this respect, we can distinguish two main types, depending on the scope of the power conferred by the relevant treaty.

The first type of mechanism is relatively unambitious. States have the obligation to submit reports to a treaty body (the Conference of the Parties ('COP'), the Secretariat or another organ) on the measures they have taken to implement the obligations under the treaty. Among these measures, it is often required that States establish a system to monitor certain environmental variables (e.g. emissions of certain substances). Monitoring systems provide the basis for the appropriate discharge of reporting obligations. This mechanism can be illustrated by reference to Articles 4 and 6 of the Protocol on the Reduction of Sulphur Emissions to the LRTAP Convention.<sup>11</sup> Article 6 provides that States parties shall 'develop national policies, programmes and strategies which shall serve as a means of reducing sulphur emissions or their transboundary fluxes, by at least 30% as soon as possible and at the latest by 1993'. They also have to 'report on progress towards achieving this goal to the Executive Body.' The 30 per cent reduction stems from the substantive obligation in Article 2 of the Protocol. The obligation to report on the measures and progress is confirmed by Article 4, which states that '[e]ach Party shall provide annually to the Executive Body its levels of national annual sulphur emissions, and the basis upon which they have been calculated'. These arrangements are also useful to illustrate the articulation of substantive obligations, horizontal and vertical, and procedural obligations on monitoring and communication.

The second type of mechanism is quite similar to the first, but with two significant differences. On the one hand, the procedural obligations are more precise. They pose specific deadlines and formats for the communication of information. On the other hand, the treaty body that receives communications has greater powers which, depending on the treaty, may include (i) the possibility to verify the information submitted, (ii) the ability to request additional information, or even (iii) the ability to collect information *proprio motu* by other means.

<sup>10</sup> R. Wolfrum, 'Means of Ensuring Compliance with and Enforcement of International Environmental Law', (1998) 272 *Recueil des cours de l'Académie de droit international de La Haye*, 9-154, in particular 36-55.

<sup>11</sup> Protocol to the Convention on Long-Range Transboundary Air Pollution 1979 on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at Least 30 per cent, 8 July 1985, 1480 UNTS 215 ('Sulphur Protocol I'). See also Protocol to the Convention on Long-Range Transboundary Air Pollution 1979 on Further Reduction of Sulphur Emissions, 14 June 1994, 2030 UNTS 122 ('Sulphur Protocol II'), Art. 5.

For example, the COP of the Ramsar Convention<sup>12</sup> established in 1990 a mechanism for the communication and verification of information concerning protected sites.<sup>13</sup> This mechanism implements Article 3, paragraphs 1 (vertical substantive obligation) and 2 (procedural obligation of monitoring and communication). Annex II to the Decision establishing this mechanism requires the use of a particular format for the communication of information ('Information Sheet on Ramsar Sites' and 'Classification System for Wetland Type').<sup>14</sup> Annex I sets up a procedure whereby States must inform the Bureau of the Convention where the ecological characteristics of a site on the list are changing (or may change) due to human intervention.<sup>15</sup> The Bureau may request additional information to assess the situation and, if it considers that the site characteristics are changing (or may change), it can collaborate with the State in question to find an acceptable solution. The procedure then becomes a political means of dispute resolution, including the elevation of the case to the Standing Committee (which also tries to find a solution) or to the COP. We will return to these procedures in Chapter 9.

Another example is the system established by CITES.<sup>16</sup> Horizontal substantive obligations which may be found *inter alia* in Articles II-IV are to be implemented through vertical substantive obligations (Article VIII(1)). Article VIII(7) provides a procedural obligation for each Party to establish and communicate to the Secretariat reports on the implementation of the Convention. These reports must be submitted within a specified time (depending on the case, either annually or biennially) and in a specific format. In this regard, the Secretariat transmitted to States parties two 'notifications' introducing the standard format for the presentation of annual<sup>17</sup> and biennial reports.<sup>18</sup> The Secretariat, which is the body in charge of reviewing these reports, can also 'request from Parties such further information with respect thereto as it deems necessary to ensure implementation of the present Convention' (Article XII(2)(d)).

A third example is the more complex system established by the UNFCCC.<sup>19</sup> Article 12 of the UNFCCC structures the procedural obligation (monitoring of emissions and absorptions, as well as the adoption of national measures) on

<sup>12</sup> Convention on Wetlands of International Importance especially as Waterfowl Habitat, 2 February 1971, 996 UNTS 245 ('Ramsar Convention').

<sup>13</sup> Recommendation 4.7. (1990) 'Mechanisms for Improved Application of the Ramsar Convention' ('Recommendation 4.7'). This mechanism had been established earlier by the Standing Committee of the Convention, but it was not until 1990 that the COP endorsed this measure (see Recommendation 4.7, first paragraph of the Operative part).

<sup>14</sup> This format has been revised over time.

<sup>15</sup> Recommendation 4.7, *supra* n. 13, Annex I, para. 1. <sup>16</sup> CITES, *supra* n. 7.

<sup>17</sup> Notification to the Parties 2011/019, 17 February 2011. This notification refers to the guidelines for the submission of annual reports, which were adopted in 2000 and revised to introduce adjustments adopted at subsequent COPs.

<sup>18</sup> Notification to the Parties 2005/035, 6 July 2005.

<sup>19</sup> United Nations Framework Convention on Climate Change, 9 May 1992, 1771 UNTS 107 ('UNFCCC').

the basis of the substantive obligations studied in Chapter 5 (obligations of all States, obligations of States listed in Annex I, obligations of States listed in Annex II). Depending on the situation of a State, the frequency of reporting, their content and the degree of verification by the treaty bodies will differ. We cannot explain here the details of the rules applicable to each category of States.<sup>20</sup> To grasp the extent and complexity that such a system entails, it suffices to recall briefly the regime applicable to those States listed in Annex I, who are also parties to the Kyoto Protocol.<sup>21</sup> These States must submit annual reports on their emissions of greenhouse gases in accordance with a specific format ('common reporting format' or 'CRF' and 'national inventory report' or 'NIR')<sup>22</sup> and, for Kyoto parties, including additional information required by the Kyoto Protocol.<sup>23</sup> In addition, they must submit regular 'national communications' on measures they have taken to reduce their emissions.<sup>24</sup> These reports may be subject to 'in-depth reviews' by teams of experts coordinated by the Secretariat.<sup>25</sup> The possibility for these teams of experts to visit a country was considered at the first COP and subsequently confirmed.<sup>26</sup> Moreover, this review includes exchanges between the team and the State in question, including the provision of additional information by the latter.<sup>27</sup> Note that, although the data is provided primarily by the States, the COP has acknowledged the possibility that data from other sources also be taken into account.<sup>28</sup>

These various illustrations of monitoring mechanisms provide a representative picture of the evolution of these systems, characterised by a higher level of institutionalisation and more detailed verification. As we will see in Chapter 9, these mechanisms often operate together with other procedures designed to facilitate compliance or manage cases of 'non-compliance'.

<sup>20</sup> See [unfccc.int/national\\_reports/items/1408.php](http://unfccc.int/national_reports/items/1408.php) (last visited on 28 January 2013).

<sup>21</sup> Kyoto Protocol, *supra* n. 6.

<sup>22</sup> Decision 3/CP.5, 'Guidelines for the Preparation of National Communications by Parties included in Annex I to the Convention, Part I: UNFCCC Reporting Guidelines on Annual Inventories', 16 February 2000, Doc. FCCC/CP/1999/7, revised several times.

<sup>23</sup> UNFCCC Secretariat, Kyoto Protocol Reference Manual on Accounting of Emissions and Assigned Amount (2008).

<sup>24</sup> Decision 4/CP.5, 'Guidelines for the Preparation of National Communications by Parties included in Annex I to the Convention, Part II: UNFCCC Reporting Guidelines for National Communications', 16 February 2000, Doc. FCCC/CP/1999/7, revised several times.

<sup>25</sup> See in particular Decision 2/CP.1, 'Review of First Communications from the Parties referred to in Annex I of the Convention', 2 June 1995, Doc. FCCC/CP/1995/7/Add.1; Decision 6/CP.3, 'Communications from Parties included in Annex I of the Convention', 6 March 1998, Doc. FCCC/CP/1997/7/Add.1; Decision 11/CP.4, 'National Communications from Parties included in Annex I to the Convention', 25 January 1999, Doc. FCCC/CP/1998/16/Add.1; Decision 6/CP.5, 'Guidelines for the Technical Review of Greenhouse Gas Inventories from Parties included in Annex I to the Convention', 2 February 2000, Doc. FCCC/CP/1999/6/Add.1, adopting the document FCCC/CP/1999/7\* ('Examination Guidelines').

<sup>26</sup> See Decision 2/CP.1, *supra* n. 25, para. 2 (c); Decision 6/CP.3, *supra* n. 25, para. 3 (a); Examination Guidelines, *supra* n. 25, para. 20.

<sup>27</sup> Examination Guidelines, *supra* n. 25, para. 19.

<sup>28</sup> See Decision 6/CP.3, *supra* n. 25, para. 2 (b), allowing the release of inventory data '[with] relevant data from authoritative sources'.

### 8.3 Dispute settlement and legal consequences

#### 8.3.1 Preliminary remarks

An increasingly common method for the implementation of international law in the second half of the twentieth century has been via the characterisation of a breach through adjudication or quasi-adjudication (e.g. a committee) and the determination of the legal consequences attached to it (responsibility for internationally wrongful acts). This method has a number of difficulties in international environmental law.<sup>29</sup> We will discuss such difficulties in due course but it seems useful, by way of introduction, to identify some of them at this stage.

First, the logic of reparation is not suited to the particularities of environmental damage, which is much more difficult and/or expensive to repair or sometimes simply irreversible. The definition of what constitutes repairable environmental damage (in particular the question of 'pure ecological damage'), the establishment of a causal link between an act and its environmental consequences (e.g. for climate change-related damage), and the determination of appropriate reparation (payment of compensation, compensation in kind, rehabilitation, etc.) are all issues that international law is still struggling to solve. Moreover, articulating prevention and reparation is particularly challenging in international environmental law because some economically desirable activities (e.g. energy generation or industrial processes) necessarily have effects on the environment. Often, it is not possible to eliminate these effects without stopping the activity itself. In such cases, international law seeks to minimise them and, depending on the cases, to provide some form of reparation.

Second, even when reparation is possible, developing rules defining its specific modalities is particularly challenging. Such reparation may, for example, be organised at the international level through rules on State responsibility for breach of horizontal obligations. However, it may also be organised at the national or transnational level, with international law requiring compliance with certain parameters, such as the granting to aggrieved individuals of access to the courts of the State where the damage originated, or the prohibition of discrimination, or, alternatively, a compensation scheme based on a combination of strict liability rules and insurance.

Third, some violations do not result from a lack of State willingness to comply with international law, as assumed by the general theory of international responsibility, but rather a technical or financial inability to do so. In this context, the characterisation of a breach and of the ensuing legal consequences may not be a suitable remedy, as further discussed in Chapter 9.

<sup>29</sup> See P.-M. Dupuy, 'A propos des mésaventures de la responsabilité internationale des Etats dans ses rapports avec la protection internationale de l'environnement', in M. Prieur (ed.), *Etudes en hommage à Alexandre Kiss* (Paris: Frisson-Roche, 1998), pp. 269-82, para. 2.



In the following paragraphs, we discuss how these difficulties have been addressed in international law. After a brief discussion of the role of adjudication in international environmental law (8.3.2), we analyse how the consequences of environmental damage are managed under international law (8.3.3).

### 8.3.2 International environmental adjudication

#### 8.3.2.1 The fora of international environmental law

Despite its important normative development over the past four decades, international environmental law has not undergone the growing judicialisation experienced in other areas. Indeed, specialised international adjudication has significantly developed in areas such as human rights, international criminal law, international trade law, foreign investment law and increasingly the law of the sea, but not on environmental matters.<sup>30</sup> To understand the extent to which environmental disputes have been brought nevertheless before international courts and tribunals, it is useful to distinguish between specialised courts in environmental law and what might be called 'borrowed fora', i.e. specialised courts in other branches of international law, but facing disputes having environmental components. Figure 8.2 introduces these two categories.

These two broad categories will be analysed in the following sections. A general feature that should be noted at this stage is that most international environmental disputes take place outside the jurisdiction and procedures created specifically to address environmental issues. The reasons for this

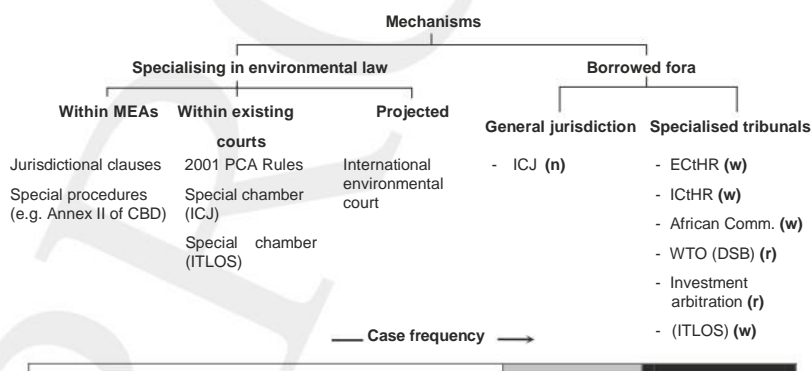


Figure 8.2: The fora of international environmental law

<sup>30</sup> On international environmental adjudication see C. Romano, *The Peaceful Settlement of International Environmental Disputes: A Pragmatic Approach* (The Hague: Kluwer, 2000); O. Lecucq and S. Maljean-Dubois (eds.), *Le rôle du juge dans le développement du droit de l'environnement* (Brussels: Bruylant, 2008); J. E. Viñuales, 'The Contribution of the International Court of Justice to the Development of International Environmental Law' (2008) 32 *Fordham International Law Journal* 232; T. Stephens, *International Courts and Environmental Protection* (Cambridge University Press, 2009).

phenomenon are unclear. It could be due to the reluctance of States to describe a dispute as 'environmental' or to use new structures or even to have their dispute subject to a body of rules that are relatively new and poorly understood. One may also refer to the fact that claims have often been brought by individuals (and not States) before international courts to which they have access. Be it as it may, this phenomenon has implications for the development of international environmental law, as discussed in Section 8.3.2.3.

### 8.3.2.2 Courts specialising in environmental matters

Efforts to create procedures and specialised tribunals in environmental law have followed three main approaches. The first is the development of a procedure for settling disputes in the context of an environmental treaty. Several treaties have dispute settlement clauses<sup>31</sup> although, in most cases, such clauses fall short of consenting to judicial dispute settlement.<sup>32</sup> The Convention on Biological Diversity goes a step further and offers a specific arbitration procedure to States parties. Pursuant to Article 27(3), States may express their specific consent to submit their disputes to the International Court of Justice ('ICJ') or to an arbitration procedure organised by Annex II. However, very few States have consented to this possibility (Austria, Cuba, Georgia and Latvia) and, in any event, this procedure has not been used yet.

A second possibility is to develop special procedures within existing institutions. This approach has taken two main forms. On the one hand, the Permanent Court of Arbitration ('PCA') adopted in 2001 'Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment'.<sup>33</sup> This instrument, which has been used only rarely, explicitly provide for some procedural powers, such as the possibility for the tribunal to request non-technical summaries of scientific matters (Article 24(4)), the power to grant interim measures to protect the environment (Article 26(1)) or to appoint experts to assist a tribunal (Article 27(1)). On the other hand, special chambers have been established within the ICJ and the International Tribunal for the Law of the Sea ('ITLOS') to address environmental issues. The 'Chamber for Environmental Matters'<sup>34</sup> was established in 1993 in response to

<sup>31</sup> Some treaties provide for a so-called 'opt-in' option, i.e. the dispute settlement mechanism is only applicable if the State explicitly consents when it becomes party to the treaty. See e.g. Vienna Convention for the Protection of the Ozone Layer, 22 March 1985, 1513 UNTS 293, Art. 11(3), UNFCCC, supra n. 19, Art. 14(2), CBD, supra n. 8, Art. 27(3). Other treaties provide an option to 'opt-out', i.e. the dispute settlement mechanism applies unless otherwise notified by the State when it becomes a party to the treaty. See e.g. Convention on the Physical Protection of Nuclear Material, 26 October 1979, 1456 UNTS 124, Art. 17(3). For a more detailed typology see Stephens, supra n. 30, p. 25.

<sup>32</sup> See UNCLOS, supra n. 5, Art. 287, Convention for the Protection of the Marine Environment of the North-East Atlantic, 22 September 1992, 2354 UNTS 67 ('OSPAR Convention'), Art. 32.

<sup>33</sup> The PCA Rules are available at: [www.pca-cpa.org](http://www.pca-cpa.org) (last visited on 31 January 2013).

<sup>34</sup> See R. Ranjeva, 'L'environnement, la Cour internationale de justice et sa chambre spéciale pour les questions d'environnement' (1994) 40 *Annuaire français de droit international* 433.

certain cases then pending before the ICJ, namely the case concerning Gabčíkovo-Nagymaros,<sup>35</sup> the requests for an advisory opinion on the Legality of Nuclear Weapons<sup>36</sup> and the case of Certain Phosphate Lands in Nauru.<sup>37</sup> More generally, the aftermath of the 1992 Rio Summit was a period of intense normative development at the domestic and international level and brought high hopes for environmental dispute settlement. However, these hopes were dashed. The ICJ chamber was never used and, eventually, the ICJ decided not to reconvene it. The ITLOS also established a special 'Chamber for Marine Environment Disputes' in 1997. The jurisdiction of this chamber is subject to the agreement of States in certain legal matters, including disputes over the interpretation or application of 'any provision' of the Convention on the Law of the Sea<sup>38</sup> 'for the protection and preservation of the marine environment', but also treaties relating to the protection of the marine environment referred to in Article 237 of UNCLOS or conferring jurisdiction on the ITLOS.<sup>39</sup> This is a potentially important jurisdictional scope but, again, the practical relevance of the chamber remains to be demonstrated.

The third approach is to create an international environmental court. A project to this effect was developed in the late 1980s, particularly by Amedeo Postiglione,<sup>40</sup> who was a judge at the Italian Corte di Cassazione and the founder of the International Court of the Environment Foundation ('ICEF').<sup>41</sup> Aside from the rather low likelihood that such a project might get off the ground, the issue of a specialised environmental court raises two main questions. The first concerns the technical difficulties that such an initiative would need to overcome, in particular the definition of its jurisdictional scope (which treaties or provision? customary environmental law?) and the potential tensions with other international courts arising from the significant environmental dimension of disputes relating to human rights, trade, investment or other matters. Moreover, the formulation of environmental norms in treaties are often broad or even vague ('soft'),<sup>42</sup> a feature that poses an additional challenge for environmental tribunals. However, the argument could be reversed: it is due to the relative vagueness of environmental norms (which

<sup>35</sup> Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v. Slovakia), Judgment, ICJ Reports 1997, p. 7 ('Gabčíkovo-Nagymaros Project').

<sup>36</sup> Legality of the Use by a State of Nuclear Weapons in Armed Conflict, Advisory Opinion, ICJ Reports 1996, p. 66 ('Legality of Nuclear Weapons - WHO'); Legality of Nuclear Weapons, supra n. 4.

<sup>37</sup> Certain Phosphate Lands in Nauru (Nauru v. Australia), Preliminary Objections, Judgment, ICJ Reports 1992, p. 240.

<sup>38</sup> UNCLOS, supra n. 5.

<sup>39</sup> Resolution on the Chamber for the Settlement of Disputes relating to the Marine Environment, 6 October 2011, ITLOS/2011/RES.2, para. 3.

<sup>40</sup> See A. Postiglione, 'A More Efficient International Law on the Environment and Setting up an International Court for the Environment within the United Nations' (1990) 20 Environmental Law 321. For a critique by the former president of the ICJ, see R. Jennings, 'Need for an Environmental Court' (1992) 20 Environmental Policy and Law 312. On this debate, see: Stephens, supra n. 30, pp. 56-61.

<sup>41</sup> See [www.icef-court.org](http://www.icef-court.org) (last visited on 31 January 2013). <sup>42</sup> Dupuy, supra n. 3, 892.

are no vaguer than broad standards routinely applied in great detail by other tribunals such as the fair and equitable treatment standard in investment law) that would make specialised environmental adjudication useful.

The second question concerns the function that such an institution should fulfil. In this regard, the limited use of procedures and specialised environmental chambers suggests that there is, at present, no urgent need to create a new institution. General (e.g. ICJ and arbitration tribunals) and specialised courts and tribunals (e.g. human rights, trade, investment) would seem sufficient to accommodate the demand for environmental adjudication. Conversely, it could be argued that specialised environmental adjudication would be useful to release the pressure on 'borrowed fora' and to give more room to environmental law. Indeed, as discussed next, the importance given to environmental protection varies significantly from one jurisdiction to another.

### 8.3.2.3 Borrowed fora

#### 8.3.2.3.1 Overview

Most environmental adjudication has taken place before borrowed fora. One could certainly argue that these fora are not being 'borrowed' since there are no 'environmental disputes' but only 'disputes with environmental components', and such disputes are heard by the relevant specialised courts. This argument is technically correct. Yet, the term 'borrowed fora' seems useful to underline the fact that environmental adjudication takes place essentially in the fora specialising in other branches of international law or, to a lesser though increasing extent, before the ICJ. This is in turn important to understand the dynamics and prospects of international environmental adjudication. Indeed, specialised courts tend to formulate these disputes in terms that suit their specialisation, sometimes to the detriment of international environmental law. Another consequence is the need to 'formulate' claims of an environmental nature in terms specific to other branches of international law so that they are heard by the respective tribunals. An apposite illustration is provided by what is often called 'human rights approaches' to environmental protection.<sup>43</sup> Due to jurisdictional and admissibility constraints, such approaches cannot protect the environment in the absence of a direct link between environmental degradation and an impairment of a human right.<sup>44</sup> Moreover, attempts to introduce environmental content into international obligations pursuing other purposes are not always well received. Like an immigrant in a foreign country, the protection of the environment is sometimes subject to tight controls within other branches of international law, such as international trade law and foreign investment law.<sup>45</sup>

<sup>43</sup> See A. Boyle and M. R. Anderson (eds.), *Human Rights Approaches to Environmental Protection* (Oxford: Clarendon, 1998).

<sup>44</sup> See F. Francioni, 'International Human Rights in an Environmental Horizon' (2010) 21 *European Journal of International Law* 41. See also Chapter 10.

<sup>45</sup> See J. E. Viñuales, 'The Environmental Regulation of Foreign Investment Schemes under International Law', in P.-M. Dupuy and J. E. Viñuales (eds.), *Harnessing Foreign Investment*

In this section, we briefly analyse the development of international environmental law in borrowed fora. The literature often discusses these fora one after the other or organises the discussion on the basis of their jurisdictional scope (see Figure 8.2 *supra*). Here, we will follow a different approach attempting to capture the differing degree of openness to environmental considerations of international courts and tribunals. This approach will highlight a different fault-line in the case-law that can be conceptually pinned down to whether a body is: (i) welcoming, (ii) neutral, (iii) reluctant to integrate environmental considerations.<sup>46</sup> Before undertaking the discussion, two caveats are in order. First, our distinction is a preliminary attempt to get closer to the reality on the ground that can be useful in addition to the approaches commonly used. Second, the assessment of the degree of openness will be on the basis of two criteria or indicators, namely the treatment of the precautionary principle and the use of the interpretation rule codified in Article 31(3)(c) of the VCLT,<sup>47</sup> which takes into account external norms in order to facilitate systemic integration.

### 8.3.2.3.2 Welcoming jurisdictions

Regarding the most welcoming jurisdictions, human rights courts provide the clearest example. The openness of these bodies has changed significantly over time, suggesting that it is not the formal requirements of their mandate, but their attitude towards environmental considerations that drives change. Thus, the European Court of Human Rights ('ECtHR') was for a long time reluctant to refer to the precautionary principle in its case-law, but it now recognises

the importance of the precautionary principle (formulated for the first time in the Rio Declaration), which 'is to be applied to ensure a high level of protection to health, the safety of consumers and the environment, in all the activities of the Community'.<sup>48</sup>

Similarly, in its jurisprudence on provisional measures the ITLOS has noted that States must 'act with prudence and caution',<sup>49</sup> which requires that States co-operate to protect the environment.<sup>50</sup> More recently, it has confirmed its commitment to the precautionary approach in its Opinion on the

to Promote Environmental Protection: Incentives and Safeguards (Cambridge University Press, 2013), pp. 273-320, at 278-85.

<sup>46</sup> The letters (w), (n) and (r) are used to emphasise this distinction in Figure 8.2 *supra*.

<sup>47</sup> Vienna Convention on the Law of Treaties, 23 May 1969, 1155 UNTS 331 ('VCLT').

<sup>48</sup> *Tatar v. Romania*, ECtHR Application No. 67021/01 (27 January 2009), para. 120.

<sup>49</sup> *Southern Bluefin Tuna Cases* (New Zealand v. Japan, Australia v. Japan), ITLOS Case Nos. 3 and 4, Order of 27 August 1999 ('Bluefin Tuna'), para. 77. See also the dissenting opinion of Judge T. Treves, who points out that the precautionary approach is the basis of paragraph 77 of the Order (Dissenting Opinion, para. 8).

<sup>50</sup> *MOX Plant Case* (Ireland v. United Kingdom), ITLOS Case No. 10, Order of 3 December 2001 ('MOX Plant Case'), para. 84.

Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area.<sup>51</sup>

A significant degree of environmental openness is also suggested by the use of systemic integration techniques. Thus, the ECtHR has referred to the Aarhus Convention<sup>52</sup> in interpreting Article 8 of the European Convention on Human Rights in disputes involving States parties to the Aarhus Convention (e.g. Romania<sup>53</sup>) but also States that are not parties to it (e.g. Turkey<sup>54</sup>). Similarly, ITLOS saw no obstacle to the interpretation of UNCLOS and the regulations issued by the International Seabed Authority in the light of other instruments (treaties or instruments of 'soft law') and customary law.<sup>55</sup> A similar analysis can be conducted with regard to the jurisprudence of the Inter-American Court of Human Rights and the African Commission on Human and Peoples' Rights. We return to this issue in Chapter 10.

### 8.3.2.3.3 A neutral ICJ

The generous reception given to international environmental law by these tribunals can be contrasted with the more neutral stance of the ICJ. As the guardian of general international law, the ICJ must be particularly careful since its law-making function (*juris-dictio* in the etymological meaning) is just as important, if not more so, as its dispute settlement function. It is therefore unsurprising that after the significant progress made in the 1990s, the ICJ has returned to a conservative approach. This approach has been discussed in some detail in Chapter 3, in connection with each of the principles of international environmental law. Suffice it to recall two points here.

First, the ICJ has given a mild reception to the precautionary principle. In the *Pulp Mills* case, Argentina referred to this principle to request a reversal of the burden of proof. The Court merely replied that 'while a precautionary approach may be relevant in the interpretation and application of the provisions of the Statute, it does not follow that it operates as a reversal of the burden of proof'.<sup>56</sup> Thus, the ICJ accepts the idea of precaution, but only as an 'approach' potentially useful for interpretation, and without clarifying its content.

<sup>51</sup> Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, ITLOS (Seabed Disputes Chamber), Case No. 17 Advisory Opinion, 1 February 2011 ('Responsibilities in the Area'), para. 125-35.

<sup>52</sup> Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 25 June 1998, 2161 UNTS 447 ('Aarhus Convention').

<sup>53</sup> *Tatar v. Romania*, supra n. 48, para. 120, para. 118.

<sup>54</sup> *Taskin and others v. Turkey*, ECtHR Application No. 46117/99 (10 November 2004, Final 30 March 2005), para. 99-100.

<sup>55</sup> Responsibilities in the Area, supra n. 51, paras. 135 and 148.

<sup>56</sup> *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, ICJ Reports 2010, p. 14 ('Pulp Mills'), para. 164. The reluctance of the Court has been criticised by Judge Cançado Trindade in his separate opinion, paras. 62-92 and 103-113.

Second, the Court resolutely applies the systemic integration technique codified in Article 31(3)(c),<sup>57</sup> including in environmental matters. In the *Gabčíkovo-Nagymaros Project* case, the Court held that the applicable treaty had to be interpreted in the light of environmental standards arising after its entry into force.<sup>58</sup> In casu the treaty included a specific provision to this effect, but this is not a necessary condition. Indeed, in the *Pulp Mills* case, the Court recalled the need to take into account some external instruments invoked by Argentina as 'relevant rules of international law applicable to relations between the parties'.<sup>59</sup> We see, therefore, that of the two indicators of openness, the ICJ has only embraced one.

#### 8.3.2.3.4 Reluctant tribunals

Tribunals specialising in international economic law have shown some reluctance to entertain international environmental law. This general statement, however, must be qualified since, first, the investment jurisprudence is mixed and, second, indicators different from those selected could possibly lead to different conclusions. That said, the Dispute Settlement Body of the WTO ('DSB') as well as a number of investment tribunals have adopted a restrictive approach. The position of the DSB on the two indicators is summarised in *EC - Biotech*, where the Panel stated '[that] there was so far no authoritative decision made by a court or tribunal which recognizes the precautionary principle as a principle of general or customary international law'.<sup>60</sup> This view can be seen as a continuation of the position taken by the Appellate Body in the first case concerning the SPS Agreement,<sup>61</sup> namely the *EC - Hormones* case.<sup>62</sup> *EC - Biotech* also illustrates the restrictive approach adopted by the DSB on systemic integration. The narrow conception of this interpretation method expounded by the Panel would require, for an external treaty norm to be taken into account to interpret trade law, that all WTO Members (not just the parties to the dispute) be also parties to the external treaty.<sup>63</sup> In practice, the environmental treaties that could satisfy this requirement are rare. It must be highlighted, however, that the Panel referred to the decision of the Appellate Body in

<sup>57</sup> *Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgment, ICJ Reports 2003, p. 161, para. 41.

<sup>58</sup> *Gabčíkovo-Nagymaros Project*, supra n. 35, para. 112.

<sup>59</sup> *Pulp Mills*, supra n. 56, para. 65 (paraphrasing Article 31(3)(c) of the VCLT). See also para. 66, which clarifies the type of standards that can be taken into account.

<sup>60</sup> *European Communities - Measures Affecting the Approval and Marketing of Biotech Products*, Panel Report, 29 September 2006, WT/DS291/R, WT/DS292/R, WT/DS293/R ('*EC - Biotech*') para. 7.88.

<sup>61</sup> *Agreement on the Application of Sanitary and Phytosanitary Measures*, 15 April 1994, 1867 UNTS 493 ('*SPS Agreement*').

<sup>62</sup> *EC - Measures Concerning Meat and Meat Products (Hormones)*, AB Report, (16 January 1998), WT/DS26/ABR, WT/DS48/AB/R ('*EC - Hormones*'), para. 124.

<sup>63</sup> *EC - Biotech Products*, supra n. 60, para. 7.70.

Shrimp-turtle<sup>64</sup> in support of its conclusion that a customary norm or even a general principle of law can be taken into account under Article 31(3)(c) of the VCLT.<sup>65</sup> But the value of such an opening depends on the position that the DSB will take with regard to the legal status (custom or general principle of law) of certain environmental principles, which brings us back to square one.

Regarding investment tribunals, the volatility of the case-law makes any transversal analysis of the reception of the precautionary principle or of the use of systemic integration quite challenging. In a jurisprudential context where decisions are highly fact and tribunal-dependent, the value of an award welcoming or rejecting the application of an environmental principle is not representative. However, it is possible to get an idea of the openness of investment tribunals to environmental considerations by reference to three possible approaches followed in practice.<sup>66</sup> The first approach treats domestic environmental measures as manifestations of unilateral and protectionist policy. It neglects the fact that there may be national measures adopted pursuant to an environmental treaty. In contrast, evidence of a favourable reception for international environmental law requires a consideration of the relationship between national measures and international environmental obligations. Such an approach seems too progressive for the time being. The influence of international environmental law in investment disputes is thus limited to an intermediate approach such that the interpretation of investment law is influenced to varying degrees by environmental considerations. For example, the requirements of environmental treaties such as the Aarhus POP Protocol<sup>67</sup> and the POP Convention have been taken into account in the interpretation of the investment chapter of the NAFTA.<sup>68</sup> However, this more welcoming approach coexists with another, more restrictive approach, under which environmental protection has no practical impact on the outcome of an investment dispute.<sup>69</sup>

We return to the interactions between international environmental law and other branches of international law in Chapters 10-12. The above remarks are, however, useful to understand why evolving in the context of welcoming, neutral and reluctant fora has significant implications for the development of

<sup>64</sup> United States - Import Prohibition of Certain Shrimp and Certain Products Containing Shrimp, Appellate Body, 12 October 1998, WT/DS58/AB/R ('Shrimp-turtle'), para. 158 and note 157.

<sup>65</sup> EC - Biotech Products, supra n. 60, para. 7.67. <sup>66</sup> See Viñuales, supra n. 45.

<sup>67</sup> Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants (POPs), 24 June 1998, 2230 UNTS 79.

<sup>68</sup> North American Free Trade Agreement, 17 December 1992, 32 ILM 296. See Chemtura Corporation (formerly Crompton Corporation) v. Government of Canada, UNCITRAL, Award (2 August 2010) ('Chemtura v. Canada'), para. 138.

<sup>69</sup> Compañía del Desarrollo de Santa Elena SA v. Republic of Costa Rica, ICSID Case No. ARB/96/1, Award (17 February 2000) ('CDSE v. Costa Rica'), para. 71. More recently see Marion Unglaube and Reinhardt Unglaube v. Costa Rica, ICSID Cases No. ARB/08/1 and ARB/09/20, Award (16 May 2012), paras. 218-21.



international environmental law, particularly with regard to the slow recognition of customary norms and the clarification of what broadly formulated environmental norms require in practice.

### 8.3.3 The consequences of environmental damage

#### 8.3.3.1 Types of consequences

International law attaches certain legal consequences in the case of 'fault', 'damage' or both. The analysis of responsibility/liability for environmental damage has taken 'fault' as its pivotal concept, making a distinction between responsibility (reparation arising from fault) and liability (reparation in the absence of fault but following damage). This is problematic for two main reasons.

First, a 'primary' or 'triggering' norm may define a situation carrying legal consequences in different ways. Typically, it will state a conduct to be followed with some degree of diligence (e.g. States shall - or shall not - do X). If this conduct is not followed, the norm will be deemed 'breached' and will trigger effects defined by another set of norms that can be referred to as 'secondary' or 'reparation' norms (e.g. in case of breach, the following consequences will apply). However, there are cases where the primary norm attaches certain consequences irrespective of fault (e.g. reparation will be due if event X occurs). This is normally called strict liability. There are reparation norms attaching consequences to the situation defined by such a primary norm (e.g. reparation for the occurrence of X will be organised according to the following principles). But this hypothesis is not technically a 'breach' of a primary norm but simply a case where all the conditions required by this norm to trigger reparation are met. This is where the second problem comes in. The subjective idea of 'fault' applied to an abstract entity like a State or an international organisation is confusing. 'Fault' in this context means 'illegality'. This conception easily fits the context of responsibility for 'breach', but it is difficult to apply to the consequences (liability) of acts without fault or illegality. Indeed, if a norm defining a hypothesis triggering legal consequences does not require illegality, the term 'breach' would be misplaced. One would more appropriately speak of the 'occurrence' of the triggering hypothesis or the fulfilment of the conditions for reparation. This terminological difficulty is further compounded by the fact that the content of such triggering norms may overlap to some extent with that of secondary norms organising reparation. Yet, the conceptual articulation between primary (triggering) and secondary (reparation) norms applies both to responsibility for breach and to liability for occurrence of certain events.

This is the conceptual context where the legal consequences of environmental damage must be analysed. Much like 'fault' (illegality), 'damage' is but a condition set by a primary norm. Depending on the cases, 'fault', 'damage' and/or other conditions will be required to trigger the legal

consequences of a norm. Fault (illegality) is always required to trigger the responsibility of States for breach. Damage may also be required (e.g. for a breach of the prevention principle), but this is not always the case (e.g. for a breach of procedural obligations, such as reporting or the conduct of an environmental impact assessment). When the situation concerns the action of an economic operator (private or public), the occurrence of damage is necessary to trigger the liability system laid out in some specific treaties (focusing on nuclear power or oil pollution damage) or called for by some general instruments.<sup>70</sup> Conversely, fault is not required, although it may trigger additional consequences. As to cases where the actions of international organisations are concerned, international law is still in its infancy. We will only note in this regard that international organisations are subject to primary norms that may trigger a system of international responsibility. In addition, some organisations, such as the World Bank or regional development banks, must comply with internal standards (including environmental standards) in the conduct of their activities. They must ensure that the projects they finance comply with these standards and a number of procedures open to civil society (e.g. the one before the World Bank Inspection Panel) have been set up to review compliance with such standards. This type of compliance review must be distinguished from traditional forms of 'responsibility' and 'liability'. The terms used in this regard are 'accountability', much like for procedures established to review compliance with human rights or environmental treaties or with corporate social responsibility standards. The foregoing distinctions are summarised in Figure 8.3.

Figure 8.3 shows that the nature of primary triggering and secondary reparation norms relevant to environmental protection changes according to the debtor of the obligation. An important element that emerges from this figure is the absence, in contemporary international law, of a strict ('no-fault') liability system for States.<sup>71</sup> Such liability has been established, however, with regard to private and public economic operators. We use the term 'liability' to refer to it, even though the term has a broader meaning

<sup>70</sup> The Commentary to the ILC Principles, *infra* n. 76, states that it concerns 'primary norms' (commentary to Art. 1, para. 2). To avoid misunderstandings this reference must be clarified. Whereas the ILC Principles set certain parameters regarding the organisation of civil liability (at the domestic level: Arts. 4 and 6; at the international level: Art. 7) that could be interpreted as 'primary' norms or obligations addressed to States to adopt certain domestic measures (vertical) or negotiate some treaties (horizontal), the content of these obligations is, in essence, to organise a system of reparation. Thus, the core provisions of the ILC Principles (defining the parameters of strict liability of economic operators) are best understood as a set of 'reparation' or 'secondary' norms. An exception to this conclusion would be principle 5 (obligation to cooperate in case of accident), which is closely related to prevention and due diligence.

<sup>71</sup> The only exception is Art. 2 of the Convention on International Liability for Damage Caused by Space Objects, 29 March 1972, 961 UNTS 187 ('A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft flight').

	States	Economic operators	International organisations
<b>Primary norms ('triggering')</b>	<ul style="list-style-type: none"> <li>- (Damage)</li> <li>- Lack of due diligence (ILC <u>Prevention Articles, 2001</u>)</li> </ul>	<ul style="list-style-type: none"> <li>- Damage</li> <li>- (Lack of due diligence)</li> </ul>	<ul style="list-style-type: none"> <li>- (Damage)</li> <li>- Lack of due diligence</li> </ul>
<b>Secondary norms ('reparation')</b>	<ul style="list-style-type: none"> <li>- Customary rules on State responsibility for internationally wrongful acts (<u>ILC State Responsibility Articles, 2001</u>)</li> <li>- Accountability mechanisms, e.g. non-compliance procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Treaty rules on civil liability (e.g. nuclear power and oil pollution)</li> <li>- General parameters (<u>ILC Principles on allocation of loss, 2006</u>)</li> <li>- Accountability mechanisms, e.g. CSR control</li> </ul>	<ul style="list-style-type: none"> <li>- Rules on international responsibility of IOs (<u>ILC Articles on IO Responsibility, 2011</u>)</li> <li>- Accountability mechanisms, e.g. inspection panels</li> </ul>

Figure 8.3: Types of legal consequences

in domestic law. Note that when a State entity acts as an economic operator, it may also be subject to the relevant strict liability treaties. Such schemes have been established for a number of activities, all characterised by a tension between the benefits and the risks they entail. We will explore some of these schemes in Section 8.3.3.3. But before discussing this particular form of liability, it is necessary to analyse the operation of the rules on State responsibility for internationally wrongful acts in an environmental context.

### 8.3.3.2 The international responsibility of the State

#### 8.3.3.2.1 Overview of the system

Clarifying the obligations of States to prevent and repair damage to the environment has raised significant legal challenges since the 1960s.<sup>72</sup> The main problem is how to account for the particular or 'extraordinary' risks posed by certain activities (e.g. nuclear electricity generation or certain industrial processes) that are useful for the State in which they are conducted, but that may cause adverse effects to other States or to the environment beyond national jurisdiction, either as a result of their normal operation (effects) or an accident (risk).

Regarding the effects of such activities, the approach followed in international law has already been described in Chapter 3 in connection with the principles of no-harm and prevention. In sum, the State has an obligation of

<sup>72</sup> For early manifestations see W. Jenks, 'Liability for Hazardous Activities' (1966) 117 *Recueil des cours de l'Académie de droit international de La Haye*, 102-200; L. F. E. Goldie, 'Liability for Damage and the Progressive Development of International Law' (1965) 14 *International and Comparative Law Quarterly* 1189; P.-M. Dupuy, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industrielle* (Paris: Pédone, 1976). See also T. Scovazzi, 'State Responsibility for Environmental Harm' (2001) 12 *Yearbook of International Environmental Law* 43; C. Nègre, 'Responsibility and International Environmental Law', in J. Crawford, A. Pellet and S. Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, 2010), pp. 803-13.

conduct ('due diligence') to ensure that its territory is not used so as to cause significant damage to the environment of other States or beyond national jurisdiction. Leaving aside a number of grey areas in the scope of this principle (see Chapter 3), the basic obligation imposed on States is breached if three conditions are met: (i) the occurrence of harm (mere risk is not sufficient); (ii) the magnitude of damage (damage below the required threshold is not enough to trigger liability) and its spatial scope (in principle, it must go beyond the territory of the State of origin) and, most importantly, (iii) a duty of due diligence (which implies that even when the damage meets the conditions of scale and scope, the State would not incur liability if it acted with due diligence). It is important to note that the exercise of such diligence is not a circumstance precluding wrongfulness or a 'cause d'exoneration' but is part of the definition of the triggering or primary norm. In other words, in order to show that the prevention principle has been violated, the injured State must establish (i) damage, (ii) its size and scope, (iii) lack of diligence of the State of origin and (iv) a causal relationship between negligence and the injury. The State of origin has thereafter the option to invoke customary circumstances precluding wrongfulness, including necessity as codified in Article 25 of the ILC Articles on State Responsibility.

With regard to the regulation of activities that entail potentially serious risks, two main approaches were possible. On the one hand, some authors suggested the creation of a strict liability regime. Under this system, any damage caused by a high-risk activity would be borne by the State of origin irrespective of the diligence shown by the latter. On the other hand, some authors considered that approach unrealistic and argued that a better way to capture the characteristics of high-risk activities was to extend the basic approach (responsibility for wrongful acts) while requiring a higher level of diligence, in particular through international standards.<sup>73</sup> The latter approach eventually prevailed, at least as regards to the responsibility of States. Indeed, since the early 1970s, the prevention principle has been increasingly recognised in treaty and customary law,<sup>74</sup> and it has also found expression in 'soft law' standards, which specify the content of the due diligence obligation. The work of the ILC, which initially sought to develop a strict liability regime applicable to States, had to admit the impossibility of moving forward without reformulating the subject, in particular by distinguishing two components. The first led to the adoption, in 2001, of 'Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities',<sup>75</sup> which must be seen as an effort to spell out the contents of the prevention principle (a triggering norm) in a transboundary context. The

<sup>73</sup> See Scovazzi, *supra* n. 72, p. 49. See also R. Pisillo Mazzeschi, 'The Due Diligence Rule and the Nature of the International Responsibility of States' (1992) 35 *German Yearbook of International Law* 9.

<sup>74</sup> See Chapter 3.

<sup>75</sup> Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, GA Res. 56/82, UN Doc. A/RES/56/82 ('ILC Prevention Articles')

second continued the work on an international strict liability regime with two important modifications, i.e. the regime targets the liability of economic operators (not States) and the text ultimately adopted in 2006 merely proposes a set of parameters in the form of 'Draft Principles on the Allocation of Loss in the case of Transboundary Harm arising out of Hazardous Activities' ('ILC Principles').<sup>76</sup> The ILC Principles will be discussed in the next section. Here, it suffices to note that these two components are not strictly speaking 'halves' of the original fruit but only what realistically could be preserved from the initial approach. Indeed, the core of the initial project, i.e. a strict liability regime applicable to States, was lost in the process.

In the light of these clarifications, we can now better understand how the general system of State responsibility for internationally wrongful acts covers both responsibility for damages as well as responsibility for risk. In both cases, the State has a duty to prevent. It must conduct itself with 'due diligence' in all circumstances. To elaborate upon this point, two additional comments seem apposite.

#### 8.3.3.2.2 Primary norms: prevention and due diligence

The first comment concerns the obligation that could trigger the system of responsibility. So far, we have only made reference to the customary principle of prevention. However, other obligations of a customary nature (e.g. the obligation of notification/consultation or to conduct an environmental impact assessment) or treaty-based (e.g. reporting obligations) may be violated by the action of the State from whom the damage originates. These obligations stipulate the terms of their compliance or, alternatively, breach,<sup>77</sup> which may be different from those mentioned above (i.e. damage of a certain size and scope, negligence). This said, many obligations arising from treaties must be interpreted in the broader context provided by the duty of 'due diligence'.

In the last two decades, this duty has received increasing attention in the literature,<sup>78</sup> as well as being the subject of jurisprudence and codification efforts. In addition to the recognition of the customary basis of the prevention principle by the ICJ<sup>79</sup> and ITLOS,<sup>80</sup> one may refer to the

<sup>76</sup> Draft Principles on the Allocation of Loss in case of Transboundary Harm from Hazardous Activities, GA Res. 61/36, UN Doc. A/RES/61/36 ('ILC Principles').

<sup>77</sup> Pulp Mills, *supra* n. 56, para. 79.

<sup>78</sup> For two book-length studies, see R. Pisillo Mazzeschi, *Due diligence e responsabilità internazionale degli Stati* (Milan: Giuffrè, 1989); A. Ouedraogo, *La diligence en droit international. Contribution à l'étude d'une notion aux contours imprécis* (PhD dissertation, The Graduate Institute, Geneva, 2011).

<sup>79</sup> Legality of Nuclear Weapons, *supra* n. 4, para. 29; Gabčíkovo-Nagymaros Project, *supra* n. 35, para. 140; Pulp Mills, *supra* n. 56, para. 110. See also the discussion of the concept in Responsibilities in the Area, *supra* n. 51.

<sup>80</sup> See Responsibilities in the Area, *supra* n. 51, in particular paras. 99 to 120 (content of the duty of due diligence), 123 (relationship with other so-called direct obligations), 131-2 (link with the precautionary approach), 136 (link with obligation to adopt the 'best

contributions of the Institut de droit international ('IDI')<sup>81</sup> and the ILC.<sup>82</sup> These contributions give a rather detailed idea of what 'due diligence' means in positive international law. Such content can be summarised in five points:

(i) the duty of due diligence is an obligation of conduct (the occurrence of damage does not entail ipso facto the violation of this obligation),<sup>83</sup> (ii) due diligence standards are defined by States within the discretion left to them under international law (which is exercised within the bounds of 'reasonableness' and is not absolute),<sup>84</sup> (iii) the duty of due diligence may vary according to various criteria, especially as regards the time,<sup>85</sup> the type of activity<sup>86</sup> and the capacity of the State in question,<sup>87</sup> (iv) due diligence concerns both the adoption of measures as well as reasonable efforts to implement them,<sup>88</sup> and (v) the exercise of such diligence involves not only the minimisation of transboundary impacts or risks but also the minimisation of effects or risks that may affect areas beyond any State jurisdiction.<sup>89</sup>

#### 8.3.3.2.3 Secondary norms: addressing complex scenarios

The second comment concerns the operation of secondary norms in the context of responsibility for harm (damage and risk) to the environment. Indeed, environmental problems pose quite unique challenges, particularly with regard to the determination of the responsible State and the injured State.<sup>90</sup> In addition to the basic scenario involving damage to a State resulting

environmental practices') and 141-2 (link with the obligation to conduct an environmental impact assessment).

<sup>81</sup> See Institut de Droit International, Resolution on 'Environment' (Rapporteur L. Ferrari Bravo) ('IDI - Environment'), Resolution on 'Responsibility and Liability under International Law for Environmental Damage' (Rapporteur F. Orrego Vicuña) ('IDI - Responsibility'), Resolution on 'Procedures for the Adoption and Implementation of Rules in the Field of Environment' (Rapporteur F. Paolillo) ('IDI - Procedures'), all adopted at the Strasbourg Session (1997).

<sup>82</sup> ILC Prevention Articles, supra n. 75, in particular Art. 3 and its commentary.

<sup>83</sup> Pulp Mills, supra n. 56, para. 187; Responsibilities in the Area, supra n. 51, para. 110; ILC Prevention Articles, supra n. 75, commentary to Art 3, para. 7.

<sup>84</sup> See IDI - Responsibility, supra n. 81, Art. 3, para. 2; ILC Prevention Articles, supra n. 75, comment to Art 3, paras. 9, 11 and 12, referring to the Alabama case where the court rejected the proposition of the UK that 'due diligence' was a national standard. But see Pulp Mills, supra n. 56, para. 205 (where the ICJ suggests that the content of a component of the duty of care, namely the customary obligation to conduct an environmental impact assessment, would be left to States).

<sup>85</sup> Responsibilities in the Area, supra n. 51, para. 117.

<sup>86</sup> There is no doubt that 'the degree of care required is proportional to the degree of risk involved in the business,' ILC Prevention Articles, supra n. 75, comment to Art. 3, para. 18; Responsibilities in the Area, supra n. 51, para. 117.

<sup>87</sup> ILC Prevention Articles, supra n. 75, commentary to Art. 3, para. 18; Responsibilities in the Area, supra n. 51, paras. 158-9.

<sup>88</sup> Pulp Mills, supra n. 56, para. 197; Responsibilities in the Area, supra n. 51, paras. 115 and 239; ILC Prevention Articles, supra n. 75, commentary to Art. 3, para. 10.

<sup>89</sup> Responsibilities in the Area, supra n. 51, paras. 142-8 (considering the obligation of environmental impact assessment as a component of the duty of care and affirming its application to the Area, that is to say to the environment outside State jurisdiction).

<sup>90</sup> Scovazzi, supra n. 72, 61-3.

from the negligence of another State, one must also consider another more difficult scenario, namely damage to the environment caused in a progressive and cumulative manner by the action of a plurality of States the effects of which are felt by many or even all States. The examples abound: climate change, marine pollution (including from land-based sources) or biodiversity loss. These difficulties are compounded by the potentially irreversible character of environmental damage and the inability to establish a causal link between the damage and the individual action of a specific State. The ILC Articles on State Responsibility can accommodate some of these specificities, but not always satisfactorily.

As regards the responsible States, the ILC Articles include the possibility that an internationally wrongful act consist of 'a series of actions or omissions defined in aggregate as wrongful' (Article 15(1)) and that it may be committed by a 'plurality of responsible States' (Article 47(1)) whose individual responsibility would be engaged. However, these provisions imply that one can establish a causal link between a series of acts attributable to several States and (insofar as the primary norm so requires) the occurrence of damage. This is not a simple step. For example, if a regional sea has five riparian States which, at different times and to different extents have discharged pollutants into the sea, the fifth State could consider its four co-riparians responsible for an internationally wrongful act of a composite nature. But each co-riparian could argue that the causal link between its specific actions and the damage has not been established. If causality is difficult to prove in a rather simple scenario as the one just described, one can imagine how difficult it may be in connection with climate change,<sup>91</sup> which results from two centuries of greenhouse gas emissions by economic operators acting with the authorisation of the countries where they are based. A possible approach in this regard can be found in the IDI Resolution, which, as noted by T. Scovazzi, proposes the introduction of a causality presumption for certain activities<sup>92</sup> and the use of joint and several liability regimes<sup>93</sup> as well as of collective reparation.<sup>94</sup>

Regarding the State that is entitled to invoke the responsibility of another State, the ILC Articles introduce a distinction based on whether the obligation breached is owed to a particular State, a group of States or the international community as a whole. The two latter categories can accommodate breaches to environmental obligations (customary or treaty-based) that go beyond the bilateral (synallagmatic) relationship between two States and are generally

<sup>91</sup> For an overview, see R. Lord, S. Goldberg, L. Rajamani and J. Brunnée (eds.), *Climate Change Liability: Transboundary Law and Practice* (Cambridge University Press, 2011). The question was asked in the context of international climate negotiations, but in a terminology that avoids the idea of reparation and emphasises the idea of assistance. Draft decision -/CP.18 see 'Approaches to Address Loss and Damage associated with Climate Change Impacts in Developing Countries Vulnerable to the Adverse Effects of Climate Change' ('Decision - loss and damage').

<sup>92</sup> IDI - Responsibility, supra n. 81, Art. 7. <sup>93</sup> Ibid., Art. 11. <sup>94</sup> Ibid., Art. 12.

owed either to all States parties to a treaty (obligations *erga omnes partes*) or to the community of States as a whole (*erga omnes*). Responsibility for breach of these obligations can be invoked by 'injured States' (a category encompassing States 'individually' or 'specially' affected as well as other States to whom the obligation is owed if the breach radically changes their position)<sup>95</sup> or by 'other' States (where the entitlement to act follows from the mere position of a State within a collective interest treaty or as a member of the international community).<sup>96</sup> It must be emphasised, however, that with respect to the latter category (Article 48), the ILC Articles are not necessarily a codification of customary law.<sup>97</sup> Moreover, even if the system were applicable to hypotheses such as climate change or marine pollution from land-based sources, including for environmental damage to areas beyond State jurisdiction, it is unclear how such damage should be repaired. As noted by Scovazzi, where restoration of the environment is not possible, any compensation paid by the responsible States would make sense only in respect of injured States and not of 'other' States. Yet, there may be cases of environmental damage for which there is no injured State. It is unclear whether and how such damage should be compensated. Article 28 of the IDI Resolution makes a useful proposal in this regard calling for States to identify or create entities entitled to make claims and receive compensation in such cases.<sup>98</sup> This proposal is a conceptual extension of solutions adopted in the context of certain civil liability regimes.

### 8.3.3.3 The liability of the economic operator

#### 8.3.3.3.1 Overview of treaty systems

Treaties regulating the liability of the economic operator (public or private) can be understood as what in private international law is often called 'uniform law' (*'droit uniforme'*), namely substantive law common to several States and established by treaty.<sup>99</sup> Indeed, the use of international law in this area is primarily intended to establish some parameters for the harmonised or at least equivalent operation of laws relating to compensation for certain damages resulting from regulated activities.

The first treaties or treaty systems were adopted in respect of damages resulting from the production of nuclear energy and oil pollution damage. As regards nuclear energy, two separate but related systems have been developed, one among OECD States<sup>100</sup> and the other under the aegis of the International Atomic Energy

<sup>95</sup> ILC Articles, *supra* n. 1, Art. 42(b). <sup>96</sup> *Ibid.*, Art. 48.

<sup>97</sup> On the existence of an *actio popularis* in international law, see F. Voefray, *L'actio popularis ou la défense de l'intérêt collectif devant les juridictions internationales* (Paris: Presses Universitaires de France, 2004).

<sup>98</sup> IDI - Responsibility, *supra* n. 81, Art. 28, noted by Scovazzi, *supra* n. 72, 63.

<sup>99</sup> On strict liability for environmental damage, see L. Bergkamp, *Liability and Environment: Private and Public Law Aspects of Civil Liability for Environmental Harm in an International Context* (The Hague: Kluwer, 2001).

<sup>100</sup> Convention on Third Party Liability in the Field of Nuclear Energy, 29 July 1960, 956 UNTS 251 ('Paris Convention'). The regime established by the Paris Convention was supplemented



Agency ('IAEA').<sup>101</sup> These systems are linked via a common protocol adopted in 1988, which seeks to harmonise the situation of persons affected by the effects of a nuclear accident governed by one of the two systems.<sup>102</sup>

As for oil pollution damage, a system was developed in the context of the International Maritime Organisation ('IMO') in response to the grounding of the Liberian oil tanker *Torrey Canyon* near the British coast in March 1967. This incident led to the adoption of the two pillars of the system, namely the 'Convention on Civil Liability' of 1969 ('CLC') and the Convention known as 'FUND' of 1971. The current system results from the overhaul of these two pillars via two protocols, which gave rise to the 'CLC/92'<sup>103</sup> and the Convention 'FUND/92'.<sup>104</sup> The regime was supplemented by two instruments addressing a case not covered in the original regime<sup>105</sup> and adding an additional layer of compensation.<sup>106</sup>

More recently, civil liability regimes have also been adopted in respect of damages resulting from industrial accidents<sup>107</sup> or the movement of certain substances, such as hazardous waste<sup>108</sup> or genetically modified

by another treaty, the Convention Supplementary to the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy, 31 January 1963, 1041 UNTS 358 ('Brussels Supplementary Convention'). The 'Paris/Brussels' system was amended in 1964, 1982 and 2004. The latter amendment, which is the result of a process initiated following the Chernobyl accident, is a major overhaul of the original, but it is not yet in force. See M. Montjoie, 'Nuclear Energy' in Crawford et al., *supra* n. 72, pp. 915-28.

<sup>101</sup> Convention on Civil Liability for Nuclear Damage, 21 May 1963, 1063 UNTS 265 ('Vienna Convention'). This treaty was amended by a Protocol to amend the Vienna Convention on Civil Liability for Nuclear Damage, 12 September 1997, 2241 UNTS 302, which leaves in place the two systems (initial system and amended system). The 1997 revision also resulted in the adoption of a Convention on Supplementary Compensation for Nuclear Damage, 12 September 1997, IAEA INFCIRC/567 ('Complementary Vienna Convention', not yet in force).

<sup>102</sup> Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, 27 September 1988, 1672 UNTS 293.

<sup>103</sup> Protocol amending the International Convention on Civil Liability for Oil Pollution Damage, 27 November 1992, available at [www.ecolex.org](http://www.ecolex.org) (TRE-001 177) ('CLC/92'). See J. L. Gabaldón García, *Curso de Derecho Marítimo Internacional* (Madrid: Marcial Pons, 2012), pp. 783-806.

<sup>104</sup> Protocol to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 27 November 1992, available at: [www.ecolex.org](http://www.ecolex.org) (TRE-001 176) ('FUND/92').

<sup>105</sup> International Convention on Civil Liability for Oil Pollution Damage, 23 March 2001, available at: [www.ecolex.org](http://www.ecolex.org) (TRE-001 377) ('BUNKERS 2001', not yet in force).

<sup>106</sup> Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution, 16 May 2003, available at: [www.ecolex.org](http://www.ecolex.org) (TRE-001 401) ('FUND/2003').

<sup>107</sup> Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, 21 May 2003, Doc. ECE/MP.WAT/11-ECE/CP.TEIA/9 ('Kiev Protocol', not yet in force).

<sup>108</sup> Convention Relating to Third Party Liability in the Field of Maritime Carriage of Nuclear Material, 17 December 1971, 944 UNTS 255; International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances, 3 May 1996 (amended by the Protocol of 30 April 2010), available at: [www.ecolex.org](http://www.ecolex.org) (TRE-001 245) ('HNS Convention 2010', not yet in force); Basel Protocol on Liability and compensation for damage resulting from transboundary

organisms.<sup>109</sup> In addition, efforts to establish a more general system were undertaken through the ILC and the Council of Europe, which led to two texts, namely the ILC Principles mentioned earlier and the Lugano Convention.<sup>110</sup> Despite their limited practical influence (neither one became binding), these instruments nevertheless provide a synthesis of the general structure followed by the other instruments in the field of civil liability for environmental damage.

#### 8.3.3.3.2 Main parameters of liability regimes

The liability regimes introduced in the previous section have four main parameters:<sup>111</sup> (i) the establishment of strict liability (without fault) of the economic operator; (ii) the requirement on economic operators to take out insurance; (iii) the creation of additional layers of compensation; (iv) the prohibition of discrimination regarding access to compensation procedures. In the following paragraphs, we will build on this general structure to present the main components of this approach. We illustrate these components by reference to the systems governing nuclear energy and oil pollution damage.

The first parameter is the most complex one and embodies the articulation of primary and secondary norms in a strict liability context. It involves specifying four elements, namely the liable entity, the nature of the liability, the grounds for exemption and any applicable limitations to the extent of liability. The identification of the liable entity must accommodate several considerations. It seems natural to require the entities benefiting from an activity to compensate for the damage that may result therefrom. Similarly, the entity that has de facto power over the dangerous activity, which is therefore in the best position to ensure its success, may also be targeted. The difficulty is that these and other considerations<sup>112</sup> do not necessarily point to the same solutions. For example, in the nuclear energy regime the liable entity is the 'operator'<sup>113</sup> (which is both the beneficiary and the entity with de facto power over the activity), whereas in the oil pollution regime liability is

movements of hazardous wastes and their disposal, 10 December 1999, available on: [www.ecolex.org](http://www.ecolex.org) (TRE-001341) ('Basel Protocol', not yet in force).

<sup>109</sup> Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, 15 October 2010, UNEP/CBD/BS/COP-MOP/5/17 (not yet in force).

<sup>110</sup> Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, 21 June 1993, available at: [www.ecolex.org](http://www.ecolex.org) (TRE-001 166) ('Lugano Convention', not yet in force).

<sup>111</sup> See ILC Principles, *supra* n. 76, Arts. 4, 6 and 7. See also Survey of Liability Regimes relevant to the Topic of International Liability for Injurious Consequences arising out of Acts not prohibited by International Law (International Liability in case of Loss from Transboundary Harm arising out of Hazardous Activities) 24 June 2004, UN Doc. A/CN.4/543 ('Study of the Secretariat'). <sup>112</sup>

See G. Doeker and T. Gehring, 'Private or International Liability for Transnational Environmental Damage - The Precedent of Conventional Liability Regimes' (1990) 2 *Journal of Environmental Law* 7.

<sup>113</sup> Paris Convention, *supra* n. 100, Arts. 1(a)(vi) and 3; Vienna Convention, *supra* n. 101, Arts. 1(a)(c) and IV(1).

channelled primarily to the owner of the ship<sup>114</sup> (de facto power over the activity) and not to the oil industry (beneficiary). Another difficulty arises when the damage is caused by the joint action of several contributing entities. We noted earlier that this is problematic in the context of the rules on State responsibility for internationally wrongful acts. In the context of civil liability regimes, this problem is solved through the establishment of joint liability:<sup>115</sup> each economic operator may have to respond for all the damage, but it has a right of action against the other liable entities. In all these contexts liability is strict or objective in nature, i.e. it is not necessary to establish fault (negligence or wilful misconduct). But such liability admits some degrees depending on the scope of the grounds for exemption (sometimes there may be a conceptual distinction between 'strict liability' and 'absolute liability', the latter allowing no ground for exemption). When the only advantage granted to injured persons is a reversal of the burden of proof, the economic entity could be exempted from liability by establishing diligence. This situation would be more appropriately characterised as a facilitated responsibility (fault-based) regime. When diligence is not allowed as a ground for exemption, the objective (strict or absolute) character of the liability regime will depend on the available grounds for exemption. An economic operator may be exempted from liability, for example, by proving that the damage was caused by circumstances such as armed conflict, a case of force majeure or the unlawful conduct of the victim or of a third person.<sup>116</sup> Strict liability systems normally entail ceilings limiting the amount that may be claimed from the liable entity.<sup>117</sup> Such ceilings pursue two competing objectives. On the one hand, ceilings are necessary to enable the pursuit of the regulated activity. Without these ceilings it would be very difficult to measure litigation risks and, as a result, economic operators would be reluctant to engage in such activities. On the other hand, ceilings must not be too low, as otherwise the economic operator would not have enough exposure to maintain the necessary level of care. One way to deal with this trade-off is to eliminate these ceilings where the economic operator is at serious fault.<sup>118</sup> This approach shows the establishment of a strict liability regime does not preclude a return to fault-based responsibility when relevant.

<sup>114</sup> CLC/92, supra n. 103, Arts. I(3), III(1) and (4).

<sup>115</sup> Ibid., Art. IV; Vienna Convention, supra n. 101, Art. II(3)(a); Paris Convention, supra n. 100, Art. 5(b).

<sup>116</sup> CLC/92, supra n. 103, Art. III(2)-(3); Vienna Convention, supra n. 101, Art. IV(2)-(3); Paris Convention, supra n. 100, Art. 9.

<sup>117</sup> On the amounts that may be required in respect of a nuclear accident or pollution by hydrocarbons see ILC Principles, supra n. 76, Art. 4 comments, para. 23 and notes. CLC/92 conditions this limitation of liability by the responsible entity having to file with the court an action for damages for an amount equal to its limit of liability. See CLC/92, supra n. 103, Art. V (3).

<sup>118</sup> See CLC/92, supra n. 103, Art. V(2); Kiev Protocol, supra n. 107, Art. 5; Basel Protocol, supra n. 108, Art. 5. See more generally the ILC Principles, supra n. 76, Art. 4, commentary, para. 24.

A practical difficulty that may arise is due to the possible insolvency of the economic operator. In general, strict liability regimes include the obligation for economic operators to take out insurance.<sup>119</sup> The insurance coverage normally extends to the ceiling applicable to the liable entity, whether the effects of the accident take place in the State of origin or abroad. The relationship between the insurer and the liable entity is contractual in nature and can change from one case to another, but they remain within the bounds set by the applicable treaty and domestic law. Normally, the injured party is entitled to bring an action directly against the insurer, which can avail itself of the same defences (particularly the grounds for exemption) as the liable entity.<sup>120</sup> Like the ceilings, insurance is an important component of strict liability regimes because it allows the commercial development of activities, which, despite their risks, are beneficial from a societal standpoint.

The recovery of capped amounts, even when facilitated by the compulsory insurance and the possibility of a direct action against the insurer, may not be sufficient to cover all damages. Nuclear accidents and oil spills may indeed cause large-scale environmental damage amounting to hundreds of millions or even billions of Euros. This is why strict liability regimes provide different 'layers' of compensation borne by a beneficiary industry (in the oil pollution damage regime) or the State (nuclear energy accidents). Such additional layers have been introduced by instruments such as the Brussels Supplementary Convention,<sup>121</sup> the Supplementary Convention to the Vienna Convention,<sup>122</sup> FUND/71 (now FUND/92)<sup>123</sup> and FUND/2003.<sup>124</sup> They come into play when the economic operator and/or the insurer is/are insolvent, when the damage exceeds the maximum insured amount and/or when damage cannot be channelled to the economic operator.<sup>125</sup> Given the purpose of these supplementary layers, which is to ensure appropriate compensation, the injured persons can bring a claim directly against the relevant Fund, which cannot avail itself of all the defences available to the economic operator.<sup>126</sup> The situation of these Funds can be understood as one of absolute liability (triggered by damage alone) although, strictly speaking, they cannot be considered as entities liable for the damage caused.

Finally, strict liability regimes seek to harmonise the situation of those affected by the occurrence of damage. In order to do so, one possibility is to set up an international redress mechanism, such as the United Nations Compensation Commission established after the Gulf War or the Iran-United States Claims

<sup>119</sup> See CLC/92, *supra* n. 103, Art. VII(1); Vienna Convention, *supra* n. 101, Art. VII; Paris Convention, *supra* n. 100, Art. 10.

<sup>120</sup> CLC/92, *supra* n. 103, Art. VII(8); Kiev Protocol, *supra* n. 107, Art. 11(3); Basel Protocol, *supra* n. 108, Art. 14(4). See more generally the ILC Principles, *supra* n. 76, Art. 4, commentary, para. 34.

<sup>121</sup> Brussels Supplementary Convention, *supra* n. 100.

<sup>122</sup> Complementary Vienna Convention, *supra* n. 101. <sup>123</sup> FUND/92, *supra* n. 104.

<sup>124</sup> FUND/2003, *supra* n. 106. <sup>125</sup> FUND/92, *supra* n. 104, Art. 4. <sup>126</sup> *Ibid.*, Art. 4(2).

Tribunal established after the Iranian revolution of 1979.<sup>127</sup> When redress procedures take place at the domestic level, which is more common, it is important to avoid any discrimination by the State of origin of the damage (or its courts) between 'local' victims and foreign victims.<sup>128</sup> Non-discrimination is a key parameter of transnational redress and it illustrates the 'amphibious' nature of such mechanisms, which rely heavily on domestic law and State courts operating under certain broad parameters set by treaty.<sup>129</sup> Note also that this requirement encompasses an obligation to grant potentially affected persons (including foreigners) access to information about the risks or, as the case may be, the damage,<sup>130</sup> which highlights the relevance of the participation principle discussed in Chapter 3 for the conduct of industrial activities.

The foregoing observations summarise the general approach underpinning the civil liability regimes applicable to economic operators. However, an important question remains to be addressed, which will bring us back to the starting point of our analysis, namely the approaches followed to assess and repair environmental damage.

#### 8.3.3.4 Assessment and reparation of environmental damage

The responsibility and liability regimes analysed in the foregoing sections organise the reparation of environmental damage.<sup>131</sup> We must now ask what the term 'environmental damage' covers and what specific modalities can follow its reparation. These two questions are related because certain types of damage 'must' be repaired only to the extent they 'can' be repaired.

To facilitate the presentation, we first introduce the basic principles governing this matter. There is no doubt that damage to people (loss of life or bodily injury) or to property (loss or damage) and *lucrum cessans* (loss of income from an activity affected by environmental damage) must be repaired.<sup>132</sup> However, these hypotheses do not cover damage to the environment as such, but rather bodily and economic injury resulting from environmental damage. Environmental damage as such is repaired by reference to the costs involved (or reasonably likely to be involved) in the adoption of certain measures. This is precisely where the modalities of reparation become important to identify those forms of damage that must be repaired. In this context, an initial distinction can be made between measures taken before an incident occurs and those taken in response to it. The first category

<sup>127</sup> ILC Principles, *supra* n. 76, Art. 6(4), commentary, para. 11.

<sup>128</sup> Paris Convention, *supra* n. 100, Art. 14(a); Vienna Convention, *supra* n. 101, Art. XIII.

<sup>129</sup> See CLC/92, *supra* n. 103, Art. X(2).

<sup>130</sup> ILC Principles, *supra* n. 76, Art. 6(5), commentary, paras. 13-15.

<sup>131</sup> See M. Bowman and A. Boyle (eds.), *Environmental Damage in International and Comparative Law: Problems of Definition and Evaluation* (Oxford University Press, 2002); SFDI, *Le dommage écologique en droit interne, communautaire et comparé* (Paris: Economica, 1992).

<sup>132</sup> See, e.g., Paris Convention, *supra* n. 100, Art. 3; Vienna Convention, *supra* n. 101, Art. I(k); CLC/92, *supra* n. 103, Art. I(6); Basel Protocol, *supra* n. 108, Art. 2.

is part of the prevention obligation and the associated cost is not part of the damage for compensation purposes. Response measures are generally compensable.<sup>133</sup> Within this category, one may further distinguish between clean-up and preventive (mitigation) measures. Measures to restore, reinstate or clean up the environment are generally compensated for,<sup>134</sup> subject to certain conditions of reasonableness and to the proof that they were indeed taken. As regards preventive (mitigation) measures, compensation depends on the treaty context. When such measures seek to mitigate the extent of damage that has already occurred, they are compensated according to the same logic as restoration measures. However, when the damage has not materialised, the cost of these measures may only be recovered if there was a 'grave and imminent threat of pollution damage'.<sup>135</sup>

A more difficult question is whether the environmental damage going beyond that considered heretofore, i.e. pure ecological damage, must be repaired. The main difficulty is that such damage is often irreversible and that, even when a loss in terms of environmental quality can be established, this loss cannot be easily assigned to an identifiable right-holder (other than the environment as such). A few examples will help grasp this concept. Should the depletion of the ozone layer or changes in the climate system, or the extinction of a species or ecosystem in an area beyond national jurisdiction be repaired? One solution to this problem is to quantify this loss by reference to measures that could be taken to address them. This is the approach underpinning the reimbursement of restoration or reinstatement measures (when at all possible), and it is also being explored in climate negotiations.<sup>136</sup> A variation of this approach consists of restoring or protecting a similar ecosystem in an area other than the damaged area. This approach underpins the various schemes of pollution credits trading (e.g. greenhouse gas emissions trading or trading of production/consumption capacity of ozone depleting or acidifying substances, or compensation quotas for the destruction of wetlands).<sup>137</sup> Another approach is to quantify (if at all possible) the value represented by the loss of a species or ecosystem for present and future generations and allocate the relevant sums to

<sup>133</sup> See CLC/92, supra n. 103, Art. I(6); Basel Protocol, supra n. 108, Art. 2.

<sup>134</sup> See CLC/92, supra n. 103, Art. I(6); Basel Protocol, supra n. 108, Art. 2.

<sup>135</sup> CLC/92, supra n. 103, Art. I(6)-(7); FUND/92, supra n. 104, Art. 3(b) and 4(1)(c); IMO, Claims Manual (London, 2008), para 1.4.5., 1.4.6., 1.4.11.

<sup>136</sup> Decision - loss and damages, supra n. 91.

<sup>137</sup> See Chapter 5. See also the techniques of compensation for the loss of wetlands in the context of the Clean Water Act of the United States (Compensatory Mitigation for Losses of Aquatic Resources, 40 CFR Part 230 Subpart J and 33 CFR 332) or, more generally, the techniques of compensation under Directive 2004/35/CE of the European Parliament and Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, OJ L143/56, 30 April 2004, para. 1.1.3: 'Compensatory remediation shall be undertaken to compensate for the interim loss of natural resources and services pending recovery. This compensation consists of additional improvements to protected natural habitats and species or water at either the damaged site or at an alternative site. It does not consist of financial compensation to members of the public'.

an entity established to represent this particular interest (e.g. a non-governmental organisation,<sup>138</sup> a local authority,<sup>139</sup> a 'Commissioner for the Environment'). This is the solution recommended by the IDI.<sup>140</sup> Overall, one may conclude that at present, international law addresses the compensation of pure ecological damage mostly through the lenses of restoration or reinstatement measures.<sup>141</sup>

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<sup>138</sup> See L. Neyret, *Atteintes au vivant et responsabilité civile* (Paris: LGDJ, 2006), pp. 577ff.

<sup>139</sup> See Tribunal correctionnel de Paris, 11th ch., 16 January 2008, No. 9934895010, cited in Y. Kerbrat, 'Le droit international face au défi de la réparation des dommages à l'environnement', in SFDI, *Le droit international face aux enjeux environnementaux* (Paris: Pedone, 2010), pp. 125-44, at 141.

<sup>140</sup> See IDI - Responsibility, *supra* n. 81, Art. 28.

<sup>141</sup> See Manual, *supra* n. 135, para. 3.6.1. to 3.6.4; Lugano Convention, *supra* n. 110, Art. 2(9)-(11).

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