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Prevention Obligations in International Environmental Law

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I. INTRODUCTION

During the past years, there has been a notable revival of the discussion on the rules on prevention of transboundary harm. The International Court of Justice (ICJ) dealt directly for the first time with the issue of transboundary pollution in *Pulp Mills on the River Uruguay (Argentina v Uruguay),*[1] which is noteworthy, and there are three more cases pending before the ICJ concerning environmental issues.[2] Of these, the dispute between Nicaragua and Costa Rica pertains directly to the obligations to prevent transboundary environmental harm. Nicaragua essentially relies on the prevention provisions of a number of treaties in order to substantiate its claim that the construction of a road by Costa Rica along their common border constitutes a breach of its obligation not to cause transboundary harm.[3] At the same time, the International Tribunal of the Law of the Sea (ITLOS) handed down an important advisory opinion on the responsibility and liability of sponsoring states in connection with activities in the area.[4] The issue of prevention obligations is thus resurfacing spectacularly, ten years after the International Law Commission (ILC) completed its work on the topic of

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[1] *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, [2010] ICJ Rep 14 [*Pulp Mills*]. Some authors have pointed out that during the last decade or so states have been more willing than ever to refer cases to binding international dispute settlement procedures. See Duncan French, *Environmental Dispute Settlement: The First (Hesitant) Signs of Spring?* 19 Hague YB Int'l L 3 (2006); Tim Stephens, International Courts and Environmental Protection (2009).

[2] *Aerial Herbicide Spraying (Ecuador v Colombia),* [2010] ICJ Rep 307; *Whaling in the Antarctic (Australia v Japan),* [2010] ICJ Rep 400; and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v Costa Rica)*, *Application of the Republic of Nicaragua Instituting Proceedings Against against the Republic of Costa Rica*, available at <http://www.icj-cij.org/docket/index.php?p1=3&p2=3&case=152&code=ncr2&p3=0> [*San Juan* case].

[3] *San Juan* case, *supra* note 2 at para 46.

[4] *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area,* Case no 17, International Tribunal for the Law of the Sea (ITLOS) Seabed Disputes Chamber (Advisory Opinion), <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf> [*Seabed* case].

prevention of transboundary harm.[5] It is obvious from the recent decisions of international courts and tribunals and from the cases pending before them that a fresh look into the prevention obligation of states is in order.

The general obligation that prohibits a state from using its territory in such a manner so as to cause transboundary harm can be traced back to the arbitral award in *Trail Smelter Arbitration (United States v Canada),* where it was held that no state may use its territory in such a way as to cause harm to another state.[6] This general rule was further developed in *Corfu Channel (United Kingdom of Great Britain and Northern Ireland v Albania)*[7] where the ICJ held that the obligation can be breached by an act as well as by an omission. Nevertheless, it was only in 1996 when the ICJ, in its advisory opinion on the *Legality of Threat or Use of Nuclear Weapons,*[8] openly recognized the rule in its proper environmental context. In the meantime, a number of important international conventions and soft law documents had affirmed the no-harm rule.[9] The fact that the ICJ reaffirmed that dictum in *Pulp Mills*[10] is significant since it was employed in a case involving environmental issues of a transboundary nature, as opposed to the *Nuclear Weapons* case, which was an advisory opinion seeking to address a general, and rather unrelated, question. It was only recently that ITLOS quoted the *Pulp Mills* decision in its endorsement of the no-harm rule in *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (Request for Advisory Opinion Submitted to the Seabed Disputes Chamber) (Seabed* case).[11] Nevertheless, such a dictum tells us very little about the content of the general rule.

The ICJ and ITLOS have concluded that the nature of the general obligation to prevent transboundary harm is one of due diligence.[12] In other words, when a state plans to carry out a hazardous activity, it must proceed with due diligence as to its possible transboundary environmental effects. Again, the content of due diligence remains elusive in the context of transboundary environmental harm.

[5] Articles on Prevention of Transboundary Harm from Hazardous Activities with Commentaries, reprinted in (2001) 2(2) YB ILC 146 [Prevention Articles].

[6] *Trail Smelter Arbitration (United States v Canada)*, Award of 11 March 1941, III UNRIAA 1903 (1965). For a collection of essays on the *Trail Smelter* arbitration, see Rebecca M Bratspies and Russell A Miller (eds), Transboundary Harm in International Law: Lessons from the Trail Smelter Arbitration (2006).

[7] *Corfu Channel (United Kingdom of Great Britain and Northern Ireland v Albania)* [1949] ICJ Rep 4 at 22.

[8] *Legality of Threat or Use of Nuclear Weapons* (Advisory Opinion), [1996] ICJ Rep 226 at para 29.

[9] United Nations Convention on the Law of the Sea, 1822 UNTS 3, Article 194(1) [UNCLOS]; Convention on Biological Diversity, 1760 UNTS 79, Article 2 [CBD]; United Nations Framework Convention on Climate Change, 1771 UNTS 107, Article 3(1) [UNFCCC]. The Stockholm and Rio Declarations also contain a principle that endorses the no-harm rule, see Principle 21 of the Stockholm Declaration on the Human Environment, 11 ILM 1416 (1972) [Stockholm Declaration], and Principle 2 of the Rio Declaration on Environment and Development, 31 ILM 874 (1992) [Rio Declaration].

[10] *Pulp Mills, supra* note 1 at para 193.

[11] *Seabed* case, *supra* note 4 at paras 110, 117–20.

[12] *Ibid*; *Pulp Mills, supra* note 1 at para 197.

This article will seek to study prevention obligations and their relationship with the due diligence no-harm obligation.[13] The second part of this article will study prevention obligations as autonomous primary obligations. The first substantive claim of the article will be that the prevention obligations have all passed into the realm of customary law. It will be shown that each prevention obligation has been enshrined in a number of treaties and that international courts and tribunals have also contributed to their acceptance as custom. At the same time, it will be demonstrated how states have refrained from objecting to the existence of these obligations when they litigate, and the work of the ILC will be studied in connection to the codification of these obligations.

The second claim of the second part is that the content of the customary prevention obligations is rather weak, and it almost invariably favours the state of origin of the environmental harm or at least gives it the last word. The analysis of state practice through treaties demonstrates that the common denominator of the obligations as they appear in these instruments leaves significant room for improvement.

The third part of the article will be devoted to drawing the link between the prevention obligations and the general no-harm obligation. In customary and conventional international law, the prevention obligations are autonomous primary obligations. At the same time, they also form part of the general due diligence obligation. Therefore, the argument put forth is that their nature is twofold—on the one hand, they operate autonomously as primary international rules, while, on the other, they are employed as criteria in determining the content of due diligence.

II. OBLIGATIONS OF PREVENTION

1. The Obligation of Prior Notification

The obligation of prior notification can be situated in the preliminary stages of the planning phase of a hazardous activity. The state that purports to authorize such an activity is placed under an obligation to notify all potentially affected states of its plans. These general terms, however, do not reveal either the threshold or the content of the obligation. The obligation to notify appears in a number of conventional instruments, albeit in varying forms. Article 3 of the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) declares that the state of origin must notify any party it deems might be affected by the planned activity.[14] In the subsequent paragraphs of

[13] This was indicated in Part III, section IV of ITLOS's advisory opinion. The ICJ followed a different course. In *Pulp Mills,* the obligations of prevention were separated in a rather artificial manner from the substantive obligations of states as far as the causing of actual pollution was concerned. See *Pulp Mills, supra* note 1 at paras 71-79. This approach was heavily criticized, and correctly so, by Judges Al Kwasaneh and Simma in their dissenting opinion. See Joint Dissenting Opinion of Judges Al-Khasawneh and Simma, <http://www.icj-cij.org/docket/files/135/15879.pdf> at para 26.

[14] Convention on Environmental Impact Assessment in a Transboundary Context, 1989 UNTS 309 [Espoo Convention].

the article, the convention provides detailed guidance as to the contents of the notification.

The state of origin shall transmit information on the proposed activity, including any plans on a proposed environmental impact assessment (EIA) and on the nature of the decision to proceed with the activity, and it shall also designate a reasonable time framework within which the possibly affected party shall respond to the notification. If the possibly affected party does not respond within the prescribed timelimit, then the state of origin may proceed with the authorization of the activity. If, on the other hand, the potentially affected party declares that it wishes to participate in the process of conducting an EIA, then the state of origin must transmit all of the necessary information and also provide for a framework wherein the two states will exchange information on the EIA. If the two parties reach an impasse in the earlier-mentioned process, then they may refer the matter to the Inquiry Commission established under Annex IV of the convention, which decides whether or not an obligation to notify is owed.[15] The work of the Inquiry Commission, however, has been very limited so far since it has proclaimed only on one case.

The Implementation Committee of the Espoo Convention has delivered more promising results. The Implementation Committee has recently had the opportunity to handle a claim of non-compliance, and its findings have helped to elucidate the content of the obligation to notify. Azerbaijan submitted that Armenia had not complied with its obligations under the convention in connection to the construction of a nuclear facility.[16] The problem according to the submission was that Armenia had not properly notified of its plans to build the reactor for two reasons: first, because the means of communication of the notification (that is, e-mail) was legally invalid under the convention and, second,

[15] According to Annex VI, the Inquiry Commission consists of three members: each state chooses one, and the two members proposed by the states elect the third one. The convention's Secretariat shall inform on the commencement of the procedure all the state parties. The first, and so far only, case that reached the Inquiry Commission was a dispute between Romania and Ukraine, and it concerned a navigation canal designed by Ukraine on its side of the Danube delta. Romania complained that it should have been notified on the proposed project. The Inquiry Commission held that the proposed project would have had possible adverse environmental impacts on six separate sectors. Therefore, Ukraine should have notified Romania and consequently trigger the obligations of Article 3. See Espoo Inquiry Commission, *Report on the Likely Significant Adverse Transboundary Impacts of the Danube-Black Sea Navigation Route at the Border of Romania and Ukraine* (2006), <http://www.unece.org/env/eia/documents/inquiry/Final%20Report%2010%20July%202006.pdf>. Nevertheless, it seems that even though Ukraine did promise to conduct an environmental impact assessment (EIA) based on the Inquiry Commission's decision it did not seek to revisit the process it had adopted up to the point the decision was taken. See Charles M Kersten, *Rethinking Transboundary Environmental Impact Assessment* 34 Yale J Int'l L 173 at 199 (2009). See also Bogdan Aurescu, *The Ukrainian 'Bystroe Canal' Project in the Danube Delta: Between Political Interest and International Environmental Law: The Report of the First Espoo Inquiry Commission* 59 Rev Hellénique Droit Int'l 553 (2006).

[16] *Report of the Implementation Committee on Its Twenty-First Session*, Doc ECE/MP.EIA/IC/2011/4 (20 June 2011) at para 12.

because it had failed to notify before consulting with its own public.[17] The Implementation Committee held that while the means of notification were not prescribed in the convention, e-mail should be regarded as a legally valid means of communication.[18] Nevertheless, it also held that Armenia was in non-compliance since it had in fact failed to notify Azerbaijan before notifying its own public.[19] This case shows that the continuing practice of the Implementation Committee might clarify provisions in the Espoo Convention to the benefit of a better understanding of the concept of notification.

It must be understood that the line between the duty to notify and the duty to conduct an EIA is not always clear. The notification of the plans for a project that might have adverse transboundary effects, more often than not entails, at least, a preliminary environmental evaluation. The distinction drawn is, to a certain extent, artificial so as to enable a better illustration of both obligations. As Phoebe Okowa correctly points out: '[t]he notification must be accompanied by information of a kind that would enable the potentially affected State to appreciate the effects of the proposed activity.'[20] The necessary information must therefore contain elements of the EIA.

Similarly detailed provisions on notification can be found in the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses (Watercourses Convention).[21] According to Article 12 of the convention, states that are planning to adopt measures that might have significant adverse effects on other watercourse states should notify these states. At the same time, the state of origin shall transmit all appropriate technical data and information to the potentially affected watercourse state. Contrary to the Espoo Convention, which leaves the time framework for a reply from the potentially affected state at the discretion of the state of origin, the 1997 convention specifically sets out a time limit of six months for a reply to be transmitted to the state of origin.[22] This period is extendable to another six months if required.

Apart from the Watercourses Convention, the obligation to notify is widely accepted in the context of conventions regulating new nuclear installations.[23]

[17] *Report of the Implementation Committee on Its Twenty-Sixth Session*, Doc ECE/MP.EIA/IC/2012/6 (26–28 November 2012), Annex at paras 27–28.

[18] *Ibid* at para 33.

[19] *Ibid* at para 36

[20] See Phoebe Okowa, *Procedural Obligations in International Environmental Agreements* 67 British YB Int'l L 275 at 300 (1996).

[21] Convention on the Law of the Non-Navigational Uses of International Watercourses, UN Doc A/51/869 (1997) [Watercourses Convention].

[22] *Ibid*, Article 13. The fact that this article did not raise any significant objections by the states during the negotiation of the convention testifies to its general acceptance. See Stephen McCaffrey, The Law of International Watercourses (2nd edition, 2007) at 473.

[23] See Alan Boyle, *Nuclear Energy and International Law: An Environmental Perspective* 60 Brit YB Int'l L 257 at 280 (1989); Okowa, *supra* note 20 at 293–96; Cesare Romano, *L'obligation de prevention des catastrophes industrielles et naturelles, in* David Caron and Charles Leben (eds), The International Aspects of Natural and Industrial Catastrophes, 379 at 411 (2001).

There is a number of bilateral conventions that specifically provide for a notification obligation incumbent on the installation state,[24] an obligation that is also featured in the Convention on Nuclear Safety.[25] An obligation of notification can also be found in Article 206 of the UN Convention on the Law of the Sea (UNCLOS), which stipulates that states whose planned activities may cause damage should notify when practicable the competent international organization or publish the results of their assessment.[26] In turn, the international organization should render public the content of such notification.[27] It is worth noting, however, that the obligation to notify, as it appears in UNCLOS, is not strict. The threshold it employs is high ('[s]ubstantial pollution of or significant and harmful changes to the marine environment') and even when the obligation is triggered, it is done only to the extent that it is practicable.[28] The notification provisions in regional instruments that purport to enhance the protection of the marine environment are more detailed. A number of conventions, often signed under the auspices of the International Maritime Organization's (IMO) regional seas programs, contain an obligation of prior notification.[29]

In addition to international conventions, relevant case law also helps consolidate the status of the obligation in international law. The decision in *Lac Lanoux Arbitration (France v Spain)* was the first to recognize the existence of the obligation, even though it did so within the narrow confines of the Treaty of Bayonne.[30] It is submitted that ever since this decision was handed down the obligation has been significantly expanded in international law.[31] The submissions

[24] See, for instance, Denmark-FRG Agreement Regulating the Exchange of Information on the Construction of Nuclear Installations along the Border, 17 ILM 274 (1978); Belgium-France Convention on Radiological Protection Relating to the Installations at the Ardennes Nuclear Power Station, 98 UNTS 288, as cited in Boyle, *supra* note 23 at 280.

[25] Convention on Nuclear Safety, 1963 UNTS 293, Article 17(iv). This article does not contain a detailed plan on how the notification will take place. This shortcoming though is probably only apparent since the convention contains very detailed provisions on the way installation states are to authorize the commissioning of new installations (Article 19), hence the basic safeguards are laid out elsewhere in the convention.

[26] UNCLOS, *supra* note 9, Articles 204, 205.

[27] *Ibid,* Article 205.

[28] The generality of the notification obligation as it appears in UNCLOS can be attributed to the fact that the convention was concluded in a manner that led to a number of compromises. See Alan Boyle, *Marine Pollution under the Law of the Sea Convention* 79 Am J Int'l L 347 (1985); Jonathan Charney, *The Marine Environment and the 1982 UN Convention on the Law of the Sea* 28 Int'l Law 879 (1994); Robin Churchill and Vaughan Lowe, The Law of the Sea, at 17, 354–55 (3rd edition, 1999).

[29] See, for instance, Article 4(c) of the Protocol Concerning Marine Pollution Resulting from Exploration and Exploitation of the Continental Shelf, 2065 UNTS 9; Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, 1140 UNTS 13; and Article 4 of the Canada/Denmark Agreement for Cooperation Relating to the Marine Environment (with annexes), 1348 UNTS 121.

[30] *Lac Lanoux Arbitration (France v Spain)*, (1957) 24 ILR 101, 281, 317, XII UNRIAA (1957) [*Lac Lanoux*]. Treaty of Bayonne, for relevent excerpts, see *Lac Lanoux* case.

[31] Nina Nordstrom, *Managing Transboundary Environmental Accidents: The State Duty to Inform, in* David Caron and Charles Leben, *supra* note 23 at 333; Patricia Birnie, Alan Boyle, and Catherine Redgwell, International Law and the Environment, at 178 (3rd edition, 2009).

of Ireland in *MOX Plant Case (Ireland v United Kingdom)* also led towards this conclusion,[32] even though none of the tribunals involved (ITLOS, the Annex VII Tribunal of UNCLOS,[33] and the European Court of Justice[34]) pronounced on the matter. An affirmation of the obligation can be found in *Pulp Mills*, where Argentina claimed that under the Statute of the River Uruguay, Uruguay was under an obligation to notify both the Commission on the River Uruguay (CARU) and Argentina on any plans that might have environmental effect on the river. The ICJ held that the nature of the activity planned by Uruguay was such that it triggered its obligation to notify Argentina and CARU before issuing a preliminary authorization to the contractors to proceed with the plan.[35] As a consequence, Uruguay had violated its obligation to notify.[36] An important aspect of the decision of the court is that it clearly stipulates that it is the state of origin itself that must notify the possibly affected states. The fact that other means of communication exist, such as the media or non-governmental organizations, does not exempt the state of origin from its obligation to notify through its official channels of communication.[37]

The number of treaty instruments and the decisions of the courts may support the conclusion that the obligation of prior notification has passed into the realm of customary international law. The problem, however, is that its content remains somewhat obscure. The obligation does not appear in a homogenous and concrete form in all instruments. The effort of the ILC to codify its content in Article 8 of its Articles on Prevention of Transboundary Harm from Hazardous Activities (Prevention Articles) has something to offer in this connection. According to Article 8, the state of origin must notify the states that might be affected by its planned activity. The article also imposes an obligation to the states that receive the notification to reply within six months. During this period, the state of origin has an obligation to refrain from proceeding with the activity. This is an interesting point, given the fact that the ICJ refused to interpret the Statute of the River Uruguay as imposing a 'no construction' obligation on Uruguay, even though it was clear that the state had not fulfilled its notification duties.[38] It is obvious that Article 8 has been heavily influenced by the deliberations of the ILC on the topic of non-navigational uses of international

[32] *MOX Plant case (Ireland v United Kingdom)*, Case no 10 (ITLOS Request for Provisional Measures) (3 December) [*MOX Plant* case].

[33] *In the Dispute Concerning the MOX Plant, International Movements of Radioactive Materials, and the Protection of the Marine Environment of the Irish Sea (Ireland v United Kingdom)* (Arbitral Tribunal Established under Annex VII of UNCLOS) [*Mox Plant* Arbitral Decision].

[34] Case C-459/03, *Commission v Ireland,* [2006] ECR I-04635.

[35] *Pulp Mills, supra* note 1 at paras 96, 121.

[36] *Ibid* at para 111.

[37] *Ibid* at para 110.

[38] *Ibid* at para 154. Judge Skotnikov disagreed with this interpretation of Uruguay's obligations. See Declaration of Judge Skotnikov, <http://www.icj-cij.org/docket/files/135/15883.pdf> at paras 2-3.

watercourses.[39] Nevertheless, it seems that, with the exception of the 'no-construction' obligation, the ILC articles lean slightly in favour of the state of origin.[40] The period of six months is not extendable, as it is in the case of the Watercourses Convention, and, more importantly, the possibly affected states cannot ask for supplementary information beyond the content of the EIA.

The obligation on notification, as it emerges from the international conventions and the limited case law, seems to impose a clear duty on the state of origin to notify the possibly affected states from a planned activity. The threshold of the obligation is that of 'significant harm,' while it seems that the decision on an imposition of a time limit on the response rests with the state of origin. The content of the notification does not extend to information beyond the confines of the EIA, while the issue of 'no construction' remains controversial. It is submitted that without it, the obligation becomes rather lukewarm and, consequently, its preventive nature becomes heavily compromised.

2. The Obligation to Conduct an EIA

The obligation to conduct an EIA at the planning stage of the activity is now well established in international law.[41] The obligation has found its way into numerous international instruments[42] and has been recently acknowledged as part of general international law by the ICJ in *Pulp Mills*.[43] The problem is that

[39] Article 8 is an almost verbatim transfer of Article 12 of the Draft Articles on the Law of Non-Navigational Uses of International Watercourses with Commentaries thereto and Resolution on Transboundary Confined Groundwater, reprinted in 2(2) YB ILC (1994) 112–13.

[40] See Louise de La Fayette, *The ILC and International Liability: A Commentary* 6 RECIEL 322 at 329 (1997); Johan Lammers, *Prevention of Transboundary Harm from Hazardous Activities: The ILC Draft Articles* 14 Hague YB Int'l L 13 (2002).

[41] Urlich Beyerlin, *Different Types of Norms in International Environmental Law: Policies, Principles and Rules, in* Daniel Bodansky, Jutta Brunée, and Ellen Hey (eds), Oxford Handbook of International Environmental Law, 425 at 439–40 (2007); Birnie, Boyle, and Redgwell, *supra* note 31 at 42. For the view that EIA is predominantly of a conventional nature, see Kersten, *supra* note 15 at 180.

[42] Besides the Espoo Convention, *supra* note 14, which is devoted to the issue, the obligation can also be found in Convention on Long Range Transboundary Air Pollution, 1302 UNTS 57, Article 2; UNCLOS, *supra* note 9, Article 206; World Charter for Nature, UNGA Res 37/7, UN Doc A/37/L.4 and Add 1 (1982) at paras 11(b) and 11(c); UNEP Guidelines of 1987 on Goals and Principles of Environmental Impact Assessment, UNEP Resolution GC 14/25 [UNEP Guidelines]; Agreement between the United States and Canada on Air Quality, 1852 UNTS 79, Article 5; Rio Declaration, *supra* note 9, Principle 17; UNECE Convention on the Transboundary Effects of Industrial Accidents, 2105 UNTS 457, Article 4(4) [Industrial Accidents Convention]. The obligation to conduct an EIA is also a component of the policy of the World Bank and the European Bank for Reconstruction and Development (EBRD). Seee EBRD, *Environmental Policy*, <http://www.ebrd.org/about/policies/enviro/policy/policy.pdf>; World Bank, Environmental and Social Safeguard Policies–Policy Objectives and Operational Principles, reprinted in *The World Bank Operational Manual*, OP.4.00, Table, A1, 2005, <http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/023c7107f95b76b88525705c002281b1/2e19e5907aaa40e785257031005f083e?OpenDocument>.

[43] '[T]he obligation to protect and preserve, under Article 41 (a) of the Statute, has to be interpreted in accordance with a practice which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment when there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.' See *Pulp Mills*, *supra* note 1 at para 204.

the obligation oscillates between strictness and lenience, rendering a solid definition of its threshold and content difficult.[44]

The most detailed provisions regarding EIA can be found in the Espoo Convention.[45] The system that the convention promotes is two-tiered. The first tier consists of a list of activities for which the EIA is mandatory. The list can be found in Appendix I of the convention. If a potentially affected party believes that an activity not included in the list may cause significant adverse transboundary effects, there are two options: (1) the potentially affected state may seek to conclude an agreement with the party that plans the activity that covers the activity[46] or (2) it may demand an EIA according to Article 2(5). Since the list of Appendix I is not considered to be exhaustive and is only applicable among the parties of the convention, attention should turn instead to Article 2(5). According to this article, the threshold that triggers the obligation is that of significant adverse effects. Appendix III of the convention contains further criteria as to whether an EIA is necessary in connection to a proposed activity. The size and the location of the activity must be taken into account[47] as does the nature and kind of the damage that might occur.[48] It follows that the state that plans the activity is in an advantageous position in the sense that the criteria stipulated in Appendix III do not contain an objective standard against which the necessity for an EIA can be measured.

The threshold of significant harm or damage is probably the one that is more commonly used in the relevant international instruments, with some notable exceptions.[49] In order to interpret this criterion, it is useful to have recourse to the way the ILC employed it in its Prevention Articles. In these articles, the ILC made it abundantly clear that the term 'significant damage' means '[s]omething more than detectable but need not be at the level of "serious" or

[44] The strictest regime for the conduct of an EIA is the one envisaged in Article 8 of the Protocol to the Antarctic Treaty on Environmental Protection, (1991) 30 ILM 1461. The details for the EIA have been included in Annex I of the protocol. The threshold set in Article 8 for the conduct of an EIA is the lowest possible since an EIA is not required for activities that will have less than minor or transitory impacts. Compare this threshold to the one provided in Article 2(5) of the Espoo Convention, *supra* note 14, where the obligation is triggered when the activity can cause significant adverse effects. Of course, this is true for activities that are not included in one of the lists of the convention where the obligation is triggered automatically.

[45] For an appraisal and a description of the Espoo Convention, see Wiecher Schrage, *The Convention on Environmental Impact Assessment in a Transboundary Context, in* Kees Bastmeijer, Timo Koivurova, Theory and Practice of Transboundary Environmental Impact Assessment, 29 (2007).

[46] See Guidance on the Practical Application of the Espoo Convention, Doc ECE/ MP.EIA/8 (2006) at 11, para 24. According to this article, an agreement may be concluded by the parties to the convention if they feel that Appendix I does not cover all relevant activities.

[47] Espoo Convention, *supra* note 14, Appendix III, paras.1(a) and 1(b).

[48] According to at para 1(c) of Appendix III, an EIA is required for activities that are particularly complex and have potentially adverse effects.

[49] Article 206 of UNCLOS, *supra* note 9, stipulates that in order for an EIA to take place there must be a possibility that the planned activity may cause '[s]ubstantial pollution.' Nevertheless, this is qualified by the next sentence according to which an EIA must take place also in the case where there might be '[s]ignificant and harmful changes in the marine environment.'

"substantial." '[50] It is submitted that this is the proper definition of the 'significant damage' threshold since it is designed in such a way so as to include all possible detrimental effects to the environment while at the same time excluding frivolous claims.

The second tier concerns the content of the assessment. The Espoo Convention presents a comprehensive picture of the content that an EIA conducted under its terms should have. Article 4(1) stipulates that the minimum information that should be included is to be found in Appendix II. The states should include a description of the proposed activity, alternative methods of carrying out the activity,[51] a description of the environmental component at stake, a description of the possible effects on this component, and a description of the preventive measures the state purports to take. It should be noted that, according to Appendix II, the state that conducts the EIA must include an examination of the possibility of not carrying out the activity at all. It must be noted in this connection that when the Implementation Committee of the Espoo Convention was faced with the task of making a determination of the compliance of Belarus it stated that it was not in its capacity or mandate to make a determination of the content of the assessments in question.[52]

The ILC on its part declined to specify the content of its article that pertains to risk assessment. Article 8 of the Prevention Articles states that any decision on the authorization of an activity must be based on an assessment of the possible transboundary harm, including any EIA. In its commentary to the article, the ILC noted that the article itself does not specify the content of the assessment. It went on to set a broad principle, namely that the assessment of the risk must be related to the risk of possible harm.[53] The ILC concluded that '[t]he specifics of what ought to be the content of assessment is left to the domestic laws of the State of conducting such assessment.'[54] This is hardly helpful.

Similar to the Espoo Convention are the criteria set out in the UN Environment Programme's (UNEP) Goals and Principles on EIA. The UNEP principles, however, offer a less detailed view of the obligation to conduct an EIA. The state of origin should include and evaluate possible alternative solutions,[55] and, moreover, it should also take into account the possibility that the activity might have an impact on the global commons.[56] It is submitted that the

[50] Prevention Articles, *supra* note 5 at 152.

[51] The possible alternatives also call for an evaluation of the 'no-action' scenario. See Article 4(1) and Appendix II of the Espoo Convention, *supra* note 14. The issue of alternative proposals in the EIA was central in the case of the Baltic Sea gas pipeline project. See Timo Koivurova and Ismo Pölönen, *Transboundary Environmental Impact Assessment in the Case of the Baltic Sea Gas Pipeline* 25 Int'l J Marine and Coastal L 151 at 170–71 (2010).

[52] *Report of the Implementation Committee on Its Twenty-Seventh Session,* Doc ECE/MP.EIA/IC/2013/2 (12–14 March 2013), Annex at para 29.

[53] Prevention Articles, *supra* note 5 at 158.

[54] *Ibid* at 158–59.

[55] UNEP Guidelines, *supra* note 42, Principle 4(d).

[56] *Ibid*, Principle 4(g).

Espoo Convention's provisions can be taken as the international standard as far as the content of an EIA is concerned. Nevertheless, it must be taken into account that the convention is a regional one and though widely ratified, cannot fill the gap that the lack of a global instrument has created.

Little guidance can be found in the international decisions that have touched upon the issue of EIA. Despite a steady stream of applications to international courts and tribunals that feature the issue of EIA, the international judiciary has not been very vocal. A substantial part of the claim of Ireland in the *MOX Plant* cases[57] was devoted to the lack of a proper EIA on behalf of the United Kingdom. ITLOS responded indirectly to the Irish claim. While it rejected the request of Ireland for the indication of provisional measures, it held that the two states should enter into consultations and exchange information on the possible impact of the MOX plant.[58] While the directions of ITLOS would seem to fall under the category of obligations pertaining to the exchange of information, they can also be seen as a push towards the enhancement of the EIA process. ITLOS prescribed the conduct of an EIA more clearly in *Case Concerning Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v Singapore)*.[59] In its order on provisional measures, the tribunal ordered the parties to co-operate through a committee that would study the impact of the proposed project on the environment.[60]

The ICJ, on its part, after having failed to address the issue in the cases of *Nuclear Tests (New Zealand v France)*[61] and *Gabčikovo-Nagymaros Project (Hungary v Slovakia)*,[62] finally acknowledged the status of the obligation as a

[57] See *Mox Plant* case, *supra* note 32 at para 19 (Request for Provisional Measures, Statement of Case of Ireland); *Mox Plant* Arbitral Decision, *supra* note 33 at para 7.5 (Memorial of Ireland).

[58] *Mox Plant* case, *supra* note 32 at para 89(1) (Request for Provisional Measures), <http://www.itlos.org/start2_en.html>.

[59] *Case Concerning Land Reclamation by Singapore in and Around the Straits of Johor (Malaysia v Singapore)*, XXVII UNRIAA 133 (2005).

[60] *Ibid* at paras 106(1)(a) and (b). The proposal of ITLOS helped the parties reach an agreement and led to the subsequent removal of the case from the docket of the tribunal. For the text of the agreement, see *ibid* at 141–45.

[61] *Nuclear Tests (New Zealand v France)*, [1974] ICJ Rep 256 [*Nuclear Tests*]; *Request for an Examination in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v France)*, [1995] ICJ Rep 288. While New Zealand had raised the issue of EIA in the 1995 case, the ICJ, based on a strict interpretation of paragraph 63 of the first case, did not touch upon it. Nevertheless, Judge Palmer and Judge Weeramantry, in their dissenting opinions, claimed that an obligation to conduct an EIA is gaining ground in international law. See *Nuclear Tests (New Zealand v France),* [1995] ICJ Rep 382 at 412 and 344 (dissenting opinion of Judge Sir Geoffrey Palmer and dissenting opinion of Judge Weeramantry).

[62] *Gabčikovo-Nagymaros Project (Hungary v Slovakia)*, [1997] ICJ Rep 7 [*Gabčikovo-Nagymaros*]. Despite the fact that Hungary devoted a substantial part in its memorial to the alleged lack of a proper EIA, the ICJ, once again, bypassed the issue. It was, for once more, Judge Weeramantry who in his separate opinion claimed that the EIA '[h]ad reached a level of general recognition at which this Court should take notice of it.' See Separate Opinion of Judge Weeramantry (at 111). For the view that the ICJ missed an opportunity to pronounce on the important environmental issues of the case, see Stephens, *supra* note 1 at 180.

rule of general international law in *Pulp Mills*.[63] The ICJ made this proclamation as a matter of general international law without confining its finding to the treaty it was interpreting in the judgment. The problem, however, is that the ICJ, while pronouncing on the normative status of the rule, did little to clarify its content. On the contrary, it held that the content of the EIA was to be decided on the basis of Uruguay's domestic legislation.[64] It therefore did not discuss the content of the obligation as it presents itself in the various international instruments and state practice, and it did not take into account the Espoo Convention or any other instrument that contains guidance as to the content of the obligation to conduct an EIA. This missed opportunity to elaborate on the EIA obligation is disappointing.

What can be deduced from the pertinent conventions and court decisions is relatively minimal. There is a clear obligation to conduct an EIA. The obligation is triggered whenever a proposed project may cause significant transboundary harm. It seems that even in cases where the potentially affected state may ask for the commissioning of an EIA,[65] it is the state of origin that has the final word, in the sense that it can insist on its decision for the realization of a given project, even if there are objections to it.[66] The content of the EIA remains the most controversial issue since both the ICJ in *Pulp Mills* and the ILC in its Prevention Articles did not attempt to provide for an international minimum standard.[67]

ITLOS's Seabed Chamber seemed to follow a different approach in its advisory opinion in the *Seabed* case.[68] Despite quoting the *Pulp Mills* dictum on the obligation to conduct an EIA, the chamber refused to imply that the content of the EIA should be defined by reference to national law. On the contrary, the chamber held that the content of the EIA that states should conduct with respect to activities in the area is defined by the recommendations and regulations on seabed mining issued by the International Seabed Authority (ISA).[69] What is more, the chamber allowed for an interpretation of the obligation to conduct an EIA so as to include the possibility of damage beyond national jurisdiction.[70]

Most recently, an arbitral tribunal affirmed the *Pulp Mills* dictum on the customary nature of the EIA. In *Indus Waters Kishenganga Arbitration* (*Islamic Republic of Pakistan v The Republic of India*), the tribunal held that '[t]here is no doubt that States are required under contemporary international

[63] *Pulp Mills*, *supra* note 1 at para 204.
[64] *Ibid* at para 205.
[65] Such is the case of the Espoo Convention, *supra* note 14, Article2(5).
[66] Even under the Espoo Convention, *supra* note 14, the state that might suffer transboundary harm cannot veto the authorization of the project. Therefore, irrespective of the nature of consultations or negotiations among the interested parties, the state of origin retains the last word.
[67] Article 7 of the ILC Prevention Articles, *supra* note 5 at 158, requires from the state of origin to conduct a risk assessment prior to its authorization of a hazardous activity and as the comments to the article make clear '[i]t does not specify what the content of the risk assessment should be.'
[68] *Seabed* case, *supra* note 4 at para 149 (Advisory Opinion).
[69] *Ibid.*
[70] *Ibid* at para 148.

law to take environmental protection into consideration when planning and developing projects that may cause injury to the bordering State.'[71] The tribunal moved on to consider the EIA as flowing from this general obligation while, at the same time, affirming the *Pulp Mills* dictum.[72]

Contrary to the approach of the ITLOS Chamber, the ICJ and the ILC opted to defer the issue to the national laws of the state of origin. This line of reasoning clearly cannot lead to a satisfactory result, since it is obvious that the multitude of technical issues that may arise can create significant disagreement between states. This may relate to both the appropriateness of a given technical solution and the interpretation of the EIA studies.[73] Therefore, a minimum standard of the content of an EIA is necessary so as to avoid excessive reliance on the national law of the state of origin, which will clearly have a bias in favour of the authorization of the project.[74] Identifying at least the basic criteria need not be a daunting task since the leading convention on the topic, the Espoo Convention, provides very useful and rather uncontroversial guidance. It is not as strict as the Protocol on Environmental Protection to the Antarctic Treaty and is not as lenient as the relevant ILC Prevention Articles.[75] Granted, its regional character poses some problems. Nevertheless, it is widely ratified, and it has been recently applied to a non-party under the necessary negotiation arrangements,[76] thus demonstrating its potential for a wider use.

3. The Obligation to Exchange Information

The obligation to exchange information in environmental law appears with different content in different contexts. First, it appears in a series of international conventions that seek to resolve environmental problems on a global scale. These conventions do not seek to regulate transboundary pollution in the sense employed in this article. They rather aim at the source of pollution or risk for adverse environmental effects. The UN Framework Convention on Climate Change (UNFCCC),[77] the Vienna Convention on the Protection of the Ozone Layer,[78] and the Protocol on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at Least 30 Per Cent to the 1979 Convention

[71] *Indus Waters Kishenganga Arbitration* (*Islamic Republic of Pakistan v The Republic of India*) (Partial Award) (18 February 2013) at para 450–52, <http://pca-cpa.org/showpage.asp?pag_id=1392>.

[72] *Ibid*.

[73] The mass of technical data can be overwhelming as the 5,000 pages of technical analysis submitted before the ICJ in the *Gabčikovo-Nagymaros* case, *supra* note 62, exemplify. See Philippe Sands, *International Environmental Litigation and Its Future* 32 U Rich L Rev 1619 at 1638 (1999).

[74] John H Knox, 'The Myth and Reality of Transboundary Environmental Impact Assessment' (2002) 96 Am J Int'l L 291 at 316. This bias can be clearly identified in the *Pulp Mills* case where Uruguay issued a preliminary environmental authorization prior to its consultations with Argentina on the possible impacts of the project in the river. See *Pulp Mills*, *supra* note 1 at para 31.

[75] Protocol on Environmental Protection to the Antarctic Treaty, 30 ILM 1455 (1991).

[76] See Koivurova and Pölönen, *supra* note 51 at 40.

[77] UNFCCC, *supra* note 9.

[78] Vienna Convention on the Protection of the Ozone Layer, 1513 UNTS 323 [Vienna Convention].

on Long Range Transboundary Air Pollution[79] each contain an article on the exchange of information.[80] The purpose of these provisions is to develop a forum under the auspices of the organs of each convention so as to render the exchange of information among parties a routine activity.[81]

The second way the obligation to exchange information appears in international environmental law is in international instruments that seek to protect a shared resource or a specific environmental component. Conventions that are designed to protect international watercourses fall in this category. The 1997 Watercourses Convention provides in Article 9 that '[w]atercourse States shall on a regular basis exchange readily available data and information on the condition of the watercourse.' According to Article 9(2), a watercourse state that is faced with a request by another watercourse state to provide information shall employ its best efforts to that end. Nevertheless, if the information is not 'readily available,' the state requesting the information shall bear the reasonable cost of collecting or processing such information. This obligation is reinforced by Article 11 of the convention, where it is stated that watercourse states shall exchange information regarding planned measures. It is interesting to note that Article 9 does not set a threshold for the obligation to take effect. It seems that the convention provides for the exchange of information for any kind of effects, both negative and positive.[82] It is significant that the 1997 convention provides for a complete set of obligations that cover all instances where an exchange of information has to take place. On the one hand, under Article 9, states shall monitor the status of the river and exchange information on its condition. On the other hand, under Article 11, which falls under the heading 'planned measures,' they shall exchange information whenever these planned measures may have significant effects on the watercourse.

More extensive are the relevant provisions on the exchange of information in the 1992 UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention).[83] Article 13(1) of the convention provides that states shall exchange information on environmental

[79] Protocol on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at Least 30 Per Cent, 1480 UNTS 215 [Sulphur Emissions Protocol].

[80] Article 4(1)(H) of the UNFCCC, *supra* note 9; Article 5 of the Vienna Convention, *supra* note 78; and Article 4 of the Sulphur Emissions Protocol, *supra* note 79.

[81] For example, Article 10 of the 1979 Convention on Long Range Transboundary Air Pollution creates an Executive Body, while Article 11 sets out a distinct role for the Secretariat. An Implementation Committee was set up under a decision in 1997 (see Decision 1997/2 Concerning the Implementation Committee, Its Structure and Functions and Procedures for Review of Compliance, *Report of the Fifteenth Session of the Executive Body*, Doc ECE/EB.AIR/53 (1998), Annex II. The totality of these organs provide for a forum within which states submit information concerning the action they have taken in reducing emissions as provided by the relevant protocols.

[82] See, on this point, Maria M Farrajota, *Notification and Consultation in the Law Applicable to International Watercourses, in* Laurence Boisson de Chazournes and Salman MA Salman (eds), Water Resources and International Law, 281 at 294 (2005).

[83] UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 1936 UNTS 269 [Water Convention].

conditions as well as on measures taken, or planned to be taken, to prevent, control, and reduce transboundary impacts. Article 13(3) is almost identical to Article 9(2) of the 1997 Watercourses Convention as it enables a state party to request specific information from another state party covering the necessary cost of retrieving or processing the data requested. Overall, the convention reflects all of the necessary features of the obligation to exchange information since its provisions are detailed and concise.[84] A similar obligation can also be found in other bilateral or multilateral conventions that regulate shared natural resources.[85] The UNCLOS also provides for an obligation to exchange information. In Article 200, it provides that states shall exchange information, either directly or through the competent international organization about pollution of the marine environment. The duty to exchange information also appears, in an environmental context, in Articles 119 and 69 that pertain to the conservation of marine living resources.

A pertinent example of a convention that regulates a geographically predefined part of the natural environment is the Convention on the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention).[86] The OSPAR Convention is important not only because it contains what can be characterized as a typical provision on the exchange of information,[87] but also because this provision has been the epicentre of one of the litigation battles between Ireland and the United Kingdom regarding the MOX plant.[88] Ireland argued before an arbitral tribunal that the United Kingdom had violated its obligation under Article 9 of the OSPAR Convention since the EIA report that Ireland received was incomplete.[89] The tribunal, rejected Ireland's claim on the basis that Article 9 referred to 'environmental information,' while the

[84] Moreover, the Water Convention, *supra* note 83, has been amended so as to allow for accession by states that are not members of the UN ECE, thus widening significantly its field of application. See Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *Amendments to Articles 25 and 26 of the Convention,* Doc ECE/MP.WAT/14/12 (January 2004).

[85] Article 24(c) of the Agreement on Cooperation for the Sustainable Use of the Mekong River, 34 ILM 864 (1995); Article 12 of the Convention on Cooperation for the Protection and Sustainable Use of the Danube River, 35 ILM 251 (1998).

[86] Convention on the Protection of the Marine Environment of the North-East Atlantic 32 ILM 1872 (1993) [OSPAR Convention]. On the OSPAR Convention, see Louise De La Fayette, *The Ospar Convention Comes into Force: Continuity and Progress* 14 Int'l J Marine & Coastal L 247 (1999); Ellen Hey, *The International Regime for the Protection of the North Sea: From Functional Approaches to a More Integrated Approach* 17 Int'l J Marine & Coastal L 325 (2002); Ellen Hey, Tony Ijlstra, and André Nollkaemper, *The 1992 Paris Convention for the Protection of the Marine Environment of the North-East Atlantic: A Critical Analysis* 8 Int'l J Marine & Coastal L 1 (2003).

[87] OSPAR Convention, *supra* note 86, Article 9.

[88] *Dispute Concerning Access to Information under Article 9 of the Ospar Convention (Ireland v United Kingdom and Northern Ireland)* (Final Award), <http://www.pca-cpa.org/upload/files/OSPAR%20Award.pdf> [OSPAR Final Award].

[89] *In the Dispute Concerning Access to Information under Article 9 of the Ospar Convention (Ireland v United Kingdom and Northern Ireland)* (Memorial of Ireland), <http://www.pca-cpa.org/upload/files/Ireland%20-%20Memorial.pdf> at paras 93–103 [Ireland's OSPAR Memorial].

information missing from the EIA report handed over to Ireland was relevant to the financial viability of the project.[90] Despite the rejection of the claim of Ireland, the tribunal offered an insight on how it viewed the obligation to exchange information under the OSPAR Convention. First, it clearly stated that it was an obligation of result and not of conduct, meaning that it was not enough that the United Kingdom had provided for the exchange of information in its national legislation if the result was that the information would not reach Ireland in the form stipulated in the convention.[91] Second, the tribunal held that it did not need to examine other conventional texts that provided for the same obligation as tools of interpretation.[92] It can be assumed that if the obligation is one of result, and it is only reasonable that it is, states cannot discharge the obligation simply by displaying a diligent effort towards its fulfilment. On the other hand, the restrictive interpretation of the convention, in isolation from other relevant texts,[93] led to a narrow definition of the term 'information.'

The third facet of the obligation to exchange information can be identified in a purely transboundary context. The Espoo Convention in Article 3, where the obligation to notify can be found, is particularly revealing. It essentially spells out the type of information that states must exchange during the preliminary stages of conducting an EIA. The state of origin shall provide all relevant information on the proposed activity as well as an indication on the expected time for response from the possibly affected state.[94] It is also provided, in paragraph 5 of the same article, that upon receipt of response by the possibly affected state, the state of origin shall transmit information on the EIA procedure as well as information of possible significant adverse effects. The duty to exchange information is also found in the Convention on the Transboundary Effects of Industrial Accidents (Industrial Accidents Convention).[95] The exchange of information in the convention is limited, as it is only natural, to a case of emergency.[96] Nevertheless, Article 15 sets out a general obligation to exchange 'readily available information.' The content of this information is described in Annex XI according to which states shall exchange information, among other

[90] OSPAR Final Award, *supra* note 88 at para 181.
[91] *Ibid* at para 137.
[92] *Ibid* paras 84, 104.
[93] Judge Griffith expressed his disagreement with this approach, which essentially boils down to a disregard for Article 31(3) (c) of the Vienna Convention of the Law of Treaties (*ibid* at 9–19 and 23, paras 2–7 (dissenting opinion of Gavan Griffith, QC)). Vienna Convention on the Law of Treaties, 1155 UNTS 331. On the rather cautious approach of the tribunal, see Malgosia Fitzmaurice, *Dispute Concerning Access to Information under Article 9 of the Ospar Convention (Ireland v United Kingdom)* 18 Int'l J Marine & Coastal L 541 at 557 (2003); Yuval Shany, *The First MOX Plant Award: The Need to Harmonize Competing Environmental Regimes and Dispute Settlement Procedures* 17 Leiden J. Int'l L 822 (2004).
[94] Espoo Convention, *supra* note 14, Article 3(2)(a).
[95] Industrial Accidents Convention, *supra* note 42.
[96] *Ibid,* Articles 8 and 10.

issues, on relevant legislative and administrative measures, contingency plans, and measures regarding prevention.

In the ILC's Prevention Articles, the obligation to exchange information appears both as an autonomous obligation in Article 12 and as part of other obligations. Article 12 stipulates that states have a continuous duty to exchange information, while Article 8 provides that in case that EIA indicates that there is a risk of transboundary harm, the state of origin shall transmit all relevant information. Despite the breadth of these provisions, the ILC did not delve into the details of the obligation.[97]

Despite the fact that a multitude of international conventions provide for a strong basis for the obligation to exchange information, little can be inferred as to its content, at least not if there is to be any degree of consistency. The ICJ in *Pulp Mills* did little to clarify the matter. The court held that the obligation to exchange information had been violated by Uruguay since it had already issued a preliminary environmental authorization of the project without informing Argentina, thus acting contrary to Article 7 of the Statute of the River Uruguay.[98] A more general comment on the obligation can be found in paragraph 113 of the decision where the ICJ states that the content of the information should be transmitted in its fullest possible form. The court added that the state of origin must inform the possibly affected states before it authorizes the proposed activity. The vagueness of this statement of the ICJ does not allow for much enthusiasm.

It can be safely concluded from the earlier discussion that the obligation to exchange information is part of general international law. Nevertheless, apart from a few points, most of its constitutive elements are a matter of speculation as it appears in different shapes and forms in different contexts. What can be assumed, with a reasonable degree of certainty, is that states must exchange information regarding activities that might have significant transboundary impacts. In most conventions, there is a requirement that the information must be readily available, and, if the possibly affected state requests something more than that, it must bear the cost of retrieving and processing the information. The state of origin can use any means it deems fit so as to transmit the information, as long as it does not assume that the interested party ought to have received the information in question through its own research or through what has been released in the public domain.

A number of questions, however, remain unanswered. The content of the information is well defined in very few instruments.[99] Moreover, as the *MOX*

[97] Besides stating that states are free to decide on the means that they will use in order to transmit the information, the commentary to Article 8 does not elaborate on the content of the information. See Prevention Articles, *supra* note 5 at 160.

[98] See *Pulp Mills*, *supra* note 1 at para 121.

[99] The only instrument that features an extensive analysis of the content of the obligation is the Industrial Accidents Convention, *supra* note 42. The rest of the conventions operate in general terms.

Plant tribunal amply exemplified, the nuances on the definition of the type of information covered by the conventions render the relevant provisions open to a variety of interpretations. If the typical provision that excludes information that pertains to national security or industrial and commercial confidentiality[100] is also taken into account, it becomes obvious why it is hard to come up with a uniform and definitive version of the obligation.

4. The Duty to Consult and Negotiate

The duty to consult and negotiate must be studied from the wider perspective of a general duty to co-operate. The duty to co-operate in international law can be found in a variety of contexts.[101] In an environmental context, it has been propagated both in decisions of international tribunals and in the texts of a number of conventions. The ICJ held in *Pulp Mills* that '[i]t is by co-operating, that the States concerned can jointly manage the rules of damage to the environment that might be created by the plans initiated by one or other of them, so as to prevent the damage in question.'[102] In the same vein, ITLOS observed in *MOX Plant* that '[t]he duty to cooperate is a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention, and general international law.'[103] Principle 4 of the Stockholm Declaration on the Human Environment and Principles 7, 14, and 27 of the Rio Declaration on Environment and Development also endorse the duty to co-operate.[104]

It is in the stage of consultations and negotiations where the duty to co-operate finds its most solid embodiment. If the states have gone through all of the prevention obligations and a disagreement as to the adverse consequences of a planned activity still persists, then they are under a duty to consult and to negotiate. Principle 19 of the Rio Declaration provides that when an activity may have significant adverse transboundary effects to other states, the state of origin

[100] See, for example, Article 9(3) of the OSPAR Convention, *supra* note 86, which contains a wide range of exceptions.

[101] Most predominantly in Article 1(3) of the UN Charter, but also in Article 3 of the Charter of Economic Rights and Duties of States, UNGA Resolution 3281 (XXIX), Doc A/Res/29/3281 (1974). The ICJ affirmed the importance of the duty to co-operate in *Fisheries Jurisdiction (United Kingdom v Iceland)*, Merits, Judgment, [1974] ICJ Rep 33 at para 78.

[102] *Pulp Mills*, *supra* note 1 at para 77.

[103] *MOX Plant* case, *supra* note 32, Request for Provisional Measures, Order of 3 December 2001, at para 82.

[104] The duty to co-operate is also included in OECD, *Recommendation of the Council on Principles Concerning Transfrontier Pollution*, Doc C(74)224 (14 November 1974). According to a more modern view, the duty to co-operate shall entail the effort towards the optimum use of the world's natural resources and not only the streamlining of transboundary problems, see Johan G Lammers, *The Present State of Research Carried out by the English-Speaking Section of the Centre for Studies and Research, in* Pierre Marie Dupuy and Johan G Lammers (eds), Transfrontier Pollution, International Law and the Protection of the Environment against Transboundary Pollution, 89 at 105 (1985); Christopher W Pinto, *Reflections on International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law* 16 Neth YB Int'l L 17 at 34–44 (1985). Stockholm Declaration. *supra* note 9; Rio Declaration, *supra* note 9.

'[s]hall consult with those States at an early stage and in good faith.' Similar requirements can be found in Title E of the OECD Recommendations on transfrontier pollution.[105] Before embarking upon the examination of the details of the general requirement to conduct consultations and negotiations, a brief comment on terminology is required. The terms *negotiations* and *consultations* denote two different things even though they are commonly used interchangeably in the literature.[106] In the case of consultations, there is no need for a disagreement to exist. Consultations take place in order to identify possible points of disagreement. When such points are identified, then states proceed with negotiations so as to resolve the problems that have arisen. This is important since it is here that the continuum between these two processes becomes evident. Nevertheless, the limits between the two terms are not always clear-cut, and it is exactly this vagueness that does not allow for a strict distinction to be made.

A definition that covers the basic aspects of the obligation to consult provides that consultation is a process over and above mere notification but does not require securing the interlocutor's consent as to the manner the potentially hazardous activity is to be carried out.[107] The difference between consultation and an obligation of consent has been demonstrated in the *Lac Lanoux* case.[108] Spain argued that the decision of France to proceed with the activity without obtaining Spain's consent was in violation of both the Treaty of Bayonne and local customary law.[109] The tribunal rejected the argument and held that neither the treaty nor customary law provided for the curtailment of state sovereignty that would come about if consent was required for a state to proceed with a planned activity in its own territory.[110] The literature on the subject points towards the exact same direction.[111]

The content of the obligation to conduct consultations and negotiations can be identified through an examination of the relevant treaties and jurisprudence.

[105] Title E, paragraph 7, provides that '[c]ountries should enter into consultation on an existing or foreseeable transfrontier pollution problem at the request of a country which is or may be directly affected and should diligently pursue such consultations on this particular problem over a reasonable period of time.' In paragraph 8, it is stipulated that states should conduct diligent consultations taking into account the principles of good neighbourliness and co-operation.

[106] Farrajota, *supra* note 82 at 328.

[107] Frederic L Kirgis, Jr, Prior Consultation in International Law, at 11 (1984); Okowa, *supra* note 20 at 332.

[108] *Lac Lanoux, supra* note 30.

[109] *Ibid* at 295, 299, 301.

[110] *Ibid* at 308, 317.

[111] Kirgis, *supra* note 107 at 361; Okowa, *supra* note 20 at 306; Peter T Stoll, *The International Environmental Law of Cooperation, in* Rüdiger Wolfrum (ed), Enforcing Environmental Standards: Economic Mechanisms as Viable Means? at 49 (1996); Birnie, Boyle, and Redgwell *supra* note 31 at 180. There are some exceptions to this view where prior consent is required, see Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal, 1673 UNTS 57. Kirgis supported the view that a local custom has emerged in Europe as far as transboundary management of watercourses is concerned, which dictates prior informed consent. See Kirgis, *supra* note 107 at 19.

Starting with UNCLOS, the obligation to enter into consultations can be inferred from Article 197, which provides for the duty to co-operate with a view to protect the marine environment.[112] Articles 61 through 63 also provide for a duty to consult, albeit in the context of fisheries. More guidance as to the content of the obligation can be found in the 1997 Watercourses Convention. Article 17 provides that the state that plans an activity should notify the possibly affected states, and, once it receives a response to the notification, the states in question should enter into consultations. An innovative aspect of the obligation, as it appears in the third paragraph of Article 17 of the Watercourses Convention, is that the state of origin should refrain from proceeding with the planned activity for a period of six months upon request of the possibly affected state. Even if this seems to run counter to the established trend in international environmental law, according to which there is no general 'no-construction' obligation,[113] this six-month time limit somewhat curtails its effect. Article 10 of the Watercourses Convention and the Water Convention provides that the state parties to the convention should enter into consultations upon the request of a possibly affected state. The principles of good faith and good neighbourliness have to be taken into account when consultations are conducted.

The same obligation appears in the Convention on Nuclear Safety,[114] where Article 17 provides that the state that wishes to build a new installation should consult with the neighbouring, possibly affected states. The Convention on Biological Diversity also provides for a duty to consult in Article 14(1)(c), which deals with the obligation to conduct an EIA.[115] Similar provisions can be found in the OSPAR Convention (Article 21(1)) and in the Convention on Long Range Transboundary Air Pollution (Article 5). These conventions, however, do not provide for any guidance as to the content of the obligation. What can be deduced is that the duty to consult and negotiate is the link connecting all of the other obligations to prevent transboundary harm. This becomes evident from the fact that the provisions dictating the duty to consult are to be found in the same articles as those that provide for prior notification and the exchange of information.

The ILC has made a commendable effort to clarify the content of the obligation to enter into consultations in its Prevention Articles. Article 9 lays out the criteria for conducting consultations. The second paragraph of the article makes direct reference to Article 10 where the criteria for the 'equitable balance of interests' are contained. The same criteria will apply in the case of consultations.

[112] This inference was taken up by Ireland in its memorial to the Annex VII Tribunal in *Mox Plant* Arbitral Decision, *supra* note 33, Memorial of Ireland, at para 8.40.

[113] For a recent affirmation of the absence of a 'no-construction' obligation, see *Pulp Mills*, *supra* note 1 at para 154. In contrast, see declaration of Judge Skotnikov, <http://www.icj-cij.org/docket/files/135/15883.pdf.> paras 2–3.

[114] Convention on Nuclear Safety, *supra* note 25.

[115] CBD, *supra* note 9.

Among them is the degree of risk of the proposed activity, the importance of the activity on a social and financial level, and the contribution of both the state of origin and the possibly affected state towards prevention measures. At the same time, the commentary to the articles makes the usual reference to the principle of good faith.[116] A very important feature of the articles is that, according to the ILC, the state planning the activity must take into account the concerns of the possibly affected state even in the case where the breakdown of negotiations can be attributed to that state.[117]

Apart from the international conventions and the work of the ILC, there have been a number of international decisions that have touched upon the issue of consultations. The ICJ had the opportunity to delve into the obligation to conduct consultations on more than one occasion. In the *North Sea Continental Shelf* cases,[118] the ICJ held that the parties to the dispute were under an '[o]bligation to enter into negotiations with a view to arriving to an agreement,'[119] that no party should insist in its position without contemplating any modification, and that negotiations had to be meaningful.[120] In *Gabčikovo-Nagymaros*, the ICJ cited the *North Sea Continental Shelf* cases precedent and held that the states were under an obligation to negotiate, in good faith, with a view to reaching an agreement.[121]

In an environmental context, the ICJ discussed the obligation to enter into consultations and negotiations in *Pulp Mills*. The court, in deciding whether Uruguay had breached its obligation to consult and negotiate in good faith, held that

> [t]here would be no point to the co-operation mechanism provided for by Articles 7 to 12 of the 1975 Statute if the party initiating the planned activity were to authorize or implement it without waiting for that mechanism to be brought to a conclusion. Indeed, if that were the case, the negotiations between the parties would no longer have any purpose.[122]

The court was also clear in stating that a 'no construction' obligation is not part of international environmental law.[123] What can be deduced, however, is that the obligation to conduct consultations and negotiations within a particular framework prescribed by a treaty should not be hampered by the state of origin through its premature authorization of the activity in question. Unfortunately,

[116] Prevention Articles, *supra* note 5 at 160.
[117] *Ibid* at 161.
[118] *North Sea Continental Shelf (Federal Republic of Germany v Denmark; Federal Republic of Germany v The Netherlands)*, [1969] ICJ Rep 3 at paras 85 and 86.
[119] *Ibid* at para 85.
[120] *Ibid*.
[121] *Gabčikovo-Nagymaros, supra* note 62 at para 141.
[122] *Pulp Mills, supra* note 1 at para 147.
[123] *Ibid* at para 282. In contrast, see *Pulp Mills, supra* note 1, Joint Dissenting Opinion of Judges Al-Khasawneh and Simma, at para 26.

the ICJ did not make a direct link between procedural and substantive rules. This is an awkward understanding of international environmental law. It draws a largely artificial line between the obligations that are designed to prevent environmental harm from the materialization of the harm, without making the effort to look for a link between the two. The obligation to consult was also affirmed by ITLOS in *MOX Plant*. The obligation to enter into consultations and negotiations was one of the measures prescribed by ITLOS in Ireland's application for provisional measures.[124] The Annex VII Tribunal reaffirmed the decision of ITLOS.[125]

Despite the constant approval of the obligation to consult and negotiate, these decisions are not enlightening as to the obligation's content. They all refer to the obligation as being a part of international law, and they all make specific reference to the principle of good faith.[126] It remains a fact that the most detailed elaboration on the issue has been offered by the *Lac Lanoux* tribunal. According to the tribunal, states are under a duty to

> [p]rendre en considération les différents intérêts en présence, de chercher à leur donner toutes les satisfactions compatibles avec la poursuite de ses propres intérêts et de montrer qu'il a, à ce sujet, un souci réel de concilier les intérêts de l'autre riverain avec les siens propres.[127]

At the same time, the tribunal gave a concise indication of what it would consider as behaviour that breaches the obligation to consult and negotiate:

> Rupture injustifiée des entretiens, de délais anormaux, de mépris des procédures prévues, de refus systématiques de prendre en considération les propositions ou les intérêts adverses, plus généralement en cas d'infraction aux règles de la bonne foi.[128]

The Implementation Committee of the Espoo Convention has also had the opportunity to discuss the content of the obligation to consult in the submission by Lithuania on the non-compliance of Belarus. The submission concerned Belarussian plans to build a nuclear reactor.[129] One of the complaints concerned the conduct of consultations by Belarus. The Implementation Committee held that Belarus on some occasions failed to provide sufficiently detailed and precise answers to Lithuania's enquiries.[130] Moreover, it held that '[c]onsultations

[124] *MOX Plant* case, *supra* note 32 at para 89.
[125] *MOX Plant* arbitral decision, *supra* note 33 at para 2.
[126] Generally on good faith, see Guy S Goodwin-Gill, *State Responsibility and the 'Good Faith' Obligation on International Law, in* Malgosia Fitzmaurice and Dan Sarooshi (eds), Issues of State Responsibility before International Judicial Institutions, 75 (2004); Robert Kolb, *Principles as Source of International Law (with Special Reference to Good Faith)* 36 Netherlands Int'l L Rev 1 (2006); Steven Reinhold, *Good Faith in International Law,* Bonn Research Papers on Public International Law, Paper no 2/2013 (23 May 2013).
[127] *Lac Lanoux*, *supra* note 30 at para 22.
[128] *Ibid* at para 11.
[129] *Report of the Implementation Committee on Its Twenty-First Session, supra* note 16 at paras14–17.
[130] *Report of the Implementation Committee on Its Twenty-Seventh Session, supra* note 52 at para 51.

should not be only a mere formality,' but they should concern the measures discussed in the particular situation.[131] Despite the very particular context within which the Implementation Committee operates, its findings are significant because they affirm the generality of the obligation to consult. The fact that the Implementation Committee managed to make a determination of compliance with the obligation[132] based on the information it had, means that such determinations, while hard due to the general terms of the obligation, are nevertheless possible, at least in the context of an international convention.

The first element of the obligation to conduct consultations, as it emerges from the relevant conventions and jurisprudence, is that consultations should aim towards a commonly accepted solution. The main cause of ambiguity lies with the lack of clarity of the content of the requirement of good faith. Some guidance as to the content of the good faith requirement in environmental negotiations may be inferred from practice. States must, for example, take into account relevant legal instruments (both hard and soft law) that might help identify the legitimacy of the interests at stake in the negotiation.[133] At the end of the day, however, the fulfilment of the requirement will have to be determined on an ad hoc basis despite the useful guidance of the *Lac Lanoux* dictum. The requirement of the equitable balance of interests as it is expressed in the ILC Prevention Articles also plays an important role. Nevertheless, the fact that the source state may proceed with the planned activity without having to secure the consent of the potentially affected state, tips the balance in favour of the source state. Therefore, while the obligation to conduct consultations is part of customary law, it is easy for the state of origin to evade substantive compliance.

5. Emergency Notification

The final stage of prevention obligations is the obligation to notify in emergency situations. While at first sight notification seems to lie beyond prevention, this is not the case. Emergency notification denotes the outer limits of prevention. It refers to the point in time where the accident has occurred but the damage is, possibly, not yet transboundary. Since the obligations in question refer to prevention of transboundary harm, notification is definitely one of them. The importance of notifying neighbouring and potentially affected states can be demonstrated by the devastating effects of the Chernobyl and Sandoz accidents. In the case of Chernobyl, the Soviet authorities only began notifying the International Atomic Energy Agency (IAEA) and possibly the affected states seventy-two hours after the accident had taken place, and they initially insisted

[131] *Ibid*.

[132] The Implementation Committee found that Belarus had not complied with its obligation to consult under Article 3(5)(b) of the Espoo Convention, *supra* note 14 at para 52.

[133] Cameron Hutchinson, *Coming from the Shadow of the Law: The Use of Law by States to Negotiate International Environmental Disputes in Good Faith* 43 Can YB Int'l L 101 at 114, 137–39 (2005).

that they were in control of the situation.[134] In the case of Sandoz, the Swiss authorities delayed notification by twenty-four hours, thus significantly reducing the ability of the riparian states to take mitigating measures.[135] In both instances, the delay of the authorities to notify the possibly affected states deprived these states of the opportunity to take appropriate measures so as to minimize the harmful effects in their territories.

The obligation to notify in case of emergency has found its way in a number of international instruments. Principle 18 of the Rio Declaration remedies the lack of any reference to the obligation of emergency notification in the Stockholm Declaration,[136] and it testifies to the development of the obligation throughout the 1970s and the 1980s. The text of Principle 18 gives primacy to natural disasters and makes a simple, but wide, reference to 'other emergencies.' The threshold set by Principle 18 is rather low, since likelihood of sudden harmful results suffices for the obligation to be triggered.[137] Despite the soft law character of these documents, their continuing and consistent reference to the obligation of emergency notification was vital in the process of its wider acceptance.

The most striking progress in the elaboration of the obligation of emergency notification has been achieved in the field of nuclear energy. The Chernobyl disaster 'served' as the necessary catalyst for change. The G-7 states immediately issued a statement confirming their obligation to notify the possibly affected states in cases of nuclear accidents.[138] Six months after the accident, the IAEA managed to conclude two conventions: one covering early notification[139]

[134] Philippe Sands, Chernobyl: Law and Communication—Transboundary Nuclear Air Pollution—The Legal Materials 1 (1988).

[135] Alexadre Kiss, '*Tchernobâle' ou la pollution accidentelle du Rhin par les produits chimiques* 33 Annuaire Français de Droit International 719 (1987); Aaron Schwabach, *The Sandoz Spill: The Failure of International Law to Protect the Rhine from Pollution* 16 Ecology LQ 443 (1989); Deveraux F McClatchey, *Chernobyl and Sandoz One Decade Later: The Evolution of State Responsibility for International Disasters, 1986-1996* 25 Ga J Int'l & Comp L 659 at 662 (1996).

[136] In reality, the states did discuss the possibility of including such an obligation but, after encountering a number of difficulties, they decided not to include it in the final text. See Nina Nordstrom, 'Managing Transboundary Environmental Accidents: The State Duty to Inform' in Caron and Leben, *supra* note 19 at 333, 338. The same year though, the UN General Assembly included the obligation in its resolution concerning co-operation in the field of the environment. Co-operation between States in the Field of the Environment, UNGA Resolution 2995 (XXVII) (15 December 1972).

[137] The obligations have also been included in other soft law instruments, see OECD Recommendation on Principles of Transfrontier Pollution, Doc C-(74) 224 (14 November 1974); OECD Recommendation of the Council for the Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, Doc C(77) 28/Final (1977); OECD Decision of the Council on the Exchange of Information Concerning Accidents Capable of Causing Transfrontier Damage, Doc C(88)84 Final (1988). The UN General Assembly took note of the Draft Principles in 1979, see UNGA Resolution 34/186 (1979).

[138] Statement on the Implications of the Chernobyl Nuclear Accident, 25 ILM 1005-6 (1986).

[139] Convention on Early Notification of a Nuclear Accident, 1439 UNTS 275 [Early Notification Convention].

and another covering post-accident co-operation.[140] Article 2 of the Convention on Early Notification of a Nuclear Accident (Early Notification Convention) provides that state parties shall notify possibly affected states either directly or through the IAEA. Article 1 sets out a broad field of application of the obligation, since it covers cases where there is either an actual or a probable release of radioactive material. This provision is refined in its second paragraph, which lists the installations and activities covered. It is worth noting that any reference to nuclear weapons is absent from the text.[141] Probably more important is the lack of a clear threshold for triggering the application of the convention.[142] This omission leaves a wide margin of discretion to the state parties as to the instances in which they are obligated to act.

Nevertheless, the IAEA did not stop its efforts towards a more refined early notification system. In an important, yet non-binding, document entitled Preparedness and Response for a Nuclear or Radiological Emergency Requirements (IAEA Emergency Requirements) sought to set out specific rules for responding to emergencies.[143] Paragraph 3.4 of the IAEA Emergency Requirements provides that the states must establish or identify an existing governmental body that will act as a national co-ordinating authority. Moreover, states shall provide the relevant bodies with the requisite funding so as to enable them to respond in a case of emergency.[144] The most important feature of these requirements is the categorization of emergency situations according to which states will have to establish response measures.[145] In the process, a series of actors are engaged in applying the response measures: the operator of the nuclear activity must appraise the situation, determine the category of emergency, and notify the co-ordinating governmental authority.[146] This authority must, in turn, notify all appropriate response organizations.[147] Finally, the state must either directly notify all possibly affected states or do so through the IAEA.[148]

[140] Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, 25 ILM 1377 (1986).

[141] India filed a declaration condemning the lack of reference to nuclear weapons, while the United Kingdom filed a declaration wherein it assumed a unilateral obligation for early notification in situations covering nuclear weapons. See Declarations/Reservations Made upon Expressing Consent to Be Bound and Objections Thereto, <http://www.iaea.org/Publications/Documents/Conventions/cenna_reserv.pdf> [IAEA Emergency Requirements].

[142] Günther Handl, *Transboundary Nuclear Accidents: The Post-Chernobyl Multilateral Legislative Agenda* 15 Ecology LQ 203 at 228–30 (1988); Okowa, *supra* note 20 at 297.

[143] Preparedness and Response for a Nuclear or Radiological Emergency Requirements, Doc GS-R-2 (2002). This document was drafted with the participation of major international organizations such as the World Health Organization, the Organisation for Economic Co-operation and Development, and the International Labour Organization.

[144] IAEA Emergency Requirements, *supra* note 141 at 6, para 3.2.

[145] *Ibid* at 8, Table I.

[146] *Ibid* at 14, para 4.12.

[147] *Ibid* at 14, para 4.13. According to Article 7 of the Early Notification Convention, *supra* note 139, provides that states must establish points of contact that will be activated in case of an emergency.

[148] IAEA Emergency Requirements, *supra* note 141 at 14, para 4.15.

Through the categorization of the emergency situations and the detailed regulation of the way response measures are to be implemented, the IAEA has provided for a concise and solid version of the obligation of emergency notification. Moreover, the level of the response measures is constantly updated through biennial meetings organized by the IAEA.[149] Overall, the Early Notification Convention and the subsequent action of the IAEA towards the refinement of the obligation of emergency notification have been vital in its development into an obligation of customary international law.

The development of the obligation outside the realm of the peaceful uses of nuclear energy has been particularly important in the context of the protection of the marine environment. UNCLOS contains a general provision in Article 198, which stipulates that states shall immediately notify other states as well as the competent international organizations in case they become aware that there is imminent or actual damage to the marine environment. A more detailed approach towards the obligation of emergency notification has been developed through the conventions concluded under the auspices of UNEP's Regional Seas Programs. The first of these conventions was the 1976 Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention),[150] while similar conventions have been concluded for many other marine areas such as the Caribbean[151] and West Africa.[152]

All of these conventions contain an almost identical provision on emergency notification. According to this provision, a state party that becomes aware of an emergency situation posing an imminent threat to the marine environment of the region must notify the competent organization as well as any potentially affected state either directly or through that organization.[153] The competent organization is being identified by the Secretariat of each convention, though more often than not it is UNEP.[154]

As was the case in the context of the nuclear conventions, the obligation of emergency notification has been elaborated on—this time not in guidelines but, rather, in protocols attached to the marine protection conventions. The 2002

[149] Of particular importance is the *Action Plan for Strengthening the International Preparedness and Response System for Nuclear and Radiological Emergencies,* <http://www-ns.iaea.org/downloads/rw/action-plans/ers-action-plan.pdf>, which seeks to set more specific targets and timetables for the states to attain.

[150] Convention for the Protection of the Mediterranean Sea against Pollution, 1102 UNTS 27 [Barcelona Convention].

[151] Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, 22 ILM 227 (1983) [Caribbean Convention].

[152] Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 20 ILM 756 (1981) [West and Central Africa Convention].

[153] Barcelona Convention, *supra* note 150, Article 9; Caribbean Convention, *supra* note 151, Article11(2); West and Central Africa Convention, *supra* note 152, Article12(2).

[154] It is worth mentioning that there are RSPs that are not functioning under the auspices of UNEP such as the Arctic, the Antarctic, or the Black Sea.

Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea to the Barcelona Convention provides a fine example.[155] The language employed in the protocol clarifies and renders stricter the equivalent provision in the convention.[156] States are under an obligation to exchange information on the emergency measures they may take,[157] they must inform each other as to the competent co-ordinating authority,[158] and they are under an obligation to notify immediately all possibly affected states.[159] Moreover, the protocol utilizes the Regional Marine Pollution Emergency Response Centre for the Mediterranean as a focal point. This response centre was established by the Barcelona Convention and is run by the IMO.[160]

Similar provisions, yet not as well refined, can be found in the Watercourses Convention and in the Water Convention respectively. The Water Convention provides in Article 14 that riparian states are under an obligation to notify each other without delay in a case of emergency that might have transboundary impact. The Watercourses Convention provisions on emergency notification begin with a broad definition of an 'emergency,'[161] and they continue by stating that the riparian state in whose territory an emergency occurs shall notify all potentially affected states 'without delay and by the most expeditious means available.'[162] The problem with the provisions of the Watercourses Convention is that they dictate that the obligation is triggered only if the damage threatened by the emergency is 'serious.' This is problematic since it may be hard to establish the possible effects of the emergency, given the fact that the key for the proper application of the obligation is expediency so as to avoid possibly catastrophic delays in responding to the damage.

An elaborate system of emergency notification has been developed under the 1997 Industrial Accidents Convention.[163] Article 8(1) provides that state parties shall have contingency plans in case of an emergency, while Article 10 provides that states shall immediately notify all possibly affected states in case an industrial accident occurs. The convention on industrial accidents goes further than

[155] Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (2002), <http://195.97.36.231/acrobatfiles/02IG14_Final_Act_Eng.pdf>.

[156] For example, notification under the protocol must be immediate in contrast to the 'without delay' employed by the convention.

[157] *Ibid*, Article 7.

[158] *Ibid*.

[159] *Ibid*, Article 10.

[160] *Ibid*, Article 1(f).

[161] Article 28(1) of the convention provides that emergency '[m]eans a situation that causes, or poses an imminent threat of causing, serious harm to watercourse States or other States and that results suddenly from natural causes, such as floods, the breaking up of ice, landslides or earthquakes, or from human conduct, such as industrial accidents.'

[162] *Ibid*, Article 28(2).

[163] Industrial Accidents Convention, *supra* note 42.

most other conventions since its Annex IX contains details as to the content and the method of communication of the emergency notification.[164] Moreover, the first Conference of the Parties of the convention adopted an Industrial Accident Notification System (IANS).[165] According to the IANS, the first step the notifying state should make is the transmission of an early warning report (EWR), which must contain basic information about the accident.[166] If the effects of the accident are not contained within the territory of the notifying state, an information report must follow the EWR. The information report has the same form as the EWR, the difference being that the notifying state must update it and transmit it every time new information or data about the accident emerge.[167] Finally, the reports are to be transmitted to predefined points of contact developed under Article 17(2) of the convention.

The detailed regulation of the emergency notification procedure contained in the convention and elaborated by the states parties is a testament to the wide acceptance of the obligation in international law and is highly informative on the content of the obligation. The ILC reaffirmed the status of the obligation as a rule of international law in Article 17 of its Prevention Articles. Even though Article 17 contains the same problematic threshold of a threat of serious damage as the 1997 Watercourses Convention does, it nevertheless clarifies the meaning of the general requirement of expediency that can be found in all of the conventions. According to the commentary to Article 17,

> the words 'without delay' mean immediately upon learning of the emergency and the phrase 'by the most expeditious means, at its disposal' indicates that the most rapid means of communication to which a State may have recourse is to be utilized.[168]

In conclusion, it is submitted that the obligation of emergency notification is well established in international law as the multitude of treaty instruments and related state practice demonstrate. The obligation is triggered when there is a threat of serious transboundary harm or when such harm suddenly occurs. The state in whose territory the harm has occurred must immediately notify either

[164] Annex IX provides that states must have agreed to a particular method of exchanging notifications and that the notification must contain the time, magnitude, and exact location of the accident.

[165] UNECE Industrial Accident Notification System, Doc CP.TEIA/2000/5 (2000). The first Conference of the Parties (COP) adopted the system in its Decision 2000/1. See Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents, *Report of the First Meeting*, Doc ECE/CP.TEIA/2 (22 February 2001) at 16, Annex II. COP-3 amended the system in its Decision 2004/3. See Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents, *Report of the Third Meeting*, Doc ECE/CP.TEIA/12 (14 February 2005) at 22, Annex III.

[166] The early warning report is a standardized form that contains information on the time, the type, and the location of the accident. Moreover, the state must make a prognosis on the development of the accident, contain any scientific data available, and describe the response measures it has taken. For more information on the early warning report, see <http://www.unece.org/env/teia/IAN%20System/early-warning.eng.pdf>.

[167] More information on the information report is available at <http://www.unece.org/env/teia/IAN%20System/information.eng.pdf>.

[168] Prevention Articles, *supra* note 5 at 169.

directly or through a predefined international organization all possibly affected states. If this obligation is combined with the obligation to exchange information, the result is that the notifying state must continue to provide the possibly affected states with new data and information as they become available.

III. THE NATURE OF THE PRVENTION OBLIGATIONS AS ELEMENTS OF THE DUE DILIGENCE OBLIGATION NOT TO CAUSE HARM

The previous section led to a number of conclusions. First, prevention obligations are of customary law nature. Second, despite their customary status, they are, in most cases, ill-defined. Third, the preceding analysis has shown that their content, in most instances, imposes minimal obligations on the state of origin. This section will seek to uncover the nature of these obligations and their connection to due diligence.

1. Obligations of Conduct or of Result?

A first step towards determining the nature of the general obligation to prevent is to identify whether they are obligations of conduct or of result.[169] The distinction is important because it serves to identify the way in which these obligations can be breached. Roberto Ago pioneered this distinction in his work as a special rapporteur of the ILC on the topic of state responsibility. According to Ago, obligations of conduct are those for which international law dictates the means through which the state will have to carry out its obligation.[170] Alternatively, obligations of result are those for which international law merely dictates a goal that the state in question must achieve regardless of the means it will use.[171] This analysis, however, proved to be problematic not only because it ran against the mainstream civil law distinction between obligations of conduct and result but also because it had significant flaws in its application.[172]

According to the now prevailing, and correct, view in the literature, obligations of conduct are defined as those that require the state to make an effort towards a result (*de s'efforcer*).[173] Alternatively, obligations of result are those

[169] *Sixth Report on State Responsibility by Mr. Ago, Special Rapporteur*, reprinted in 2(1) YB ILC 4 (1977). See also Jean Combacau, *Obligations de résultat et obligations de comportement: quelques questions et pas de réponse, in* Mélanges offerts a Paul Reuter, Le droit international: unité et diversité, at 181 (1981); Pierre-Marie Dupuy, *Reviewing the Difficulties of Codification: On Ago's Classification of Obligations of Means and Obligations of Result in Relation to State Responsibility* 10 Eur J Int'l L 371 (1999); Antonio Marchesi, *The Distinction between Obligations of Conduct and Obligations of Result Following Its Deletion from the Draft Articles on State Responsibility, in* Studi di diritto inernazionale in onore di Gaetano Arangio-Ruiz, 826 (2004).

[170] See *Sixth Report on State Responsibility, supra* note 169.

[171] Combacau, *supra* note 169 at 724; Dupuy, *supra* note 169; Linos Alexander Sicilianos, *La responsabilité de l'État pour absence de prevention et de répression des crimes internationaux, in* Hervé Ascensio, Emmanuel Decaux, and Alain Pellet (eds), Droit International Penal, 119 at 122 (2000).

[172] Dupuy, *supra* note 169.

[173] Combacau, *supra* note 169.

that require the state to achieve a result (*de reussir*).[174] A decisive criterion in this respect is the existence of unforeseeable factors that might have an impact on the state's effort to comply with its obligation. Whenever such factors exist and are allowed to be taken into consideration within the context of the primary obligation, the obligation that the state must carry out is one of conduct.[175] In the case of the general obligation to prevent transboundary harm, there is a multitude of unforeseeable factors that are at play due to the complex nature of modern technology. If this alone is not enough to lead to the realization that the no harm obligation is an obligation of conduct, this conclusion becomes evident from the fact that whenever a reference is made to the duty to not cause transboundary harm, it is accompanied by its characterization as a due diligence obligation.[176] It must be clear, however, that not all obligations of conduct are due diligence obligations, despite being commonly referred to as such.[177] Nevertheless, in the case of the obligation not to cause transboundary harm, states must act with due care in the process of discharging their obligation.

2. The Inadequacy of the Due Diligence Standard

Having established that the obligation not to cause transboundary harm is an obligation of conduct, its relation to due diligence must be explored so as to reveal, in turn, its relation to the obligations to prevent transboundary harm.[178] The ICJ had discussed, extensively, the issue of due diligence in *United States Diplomatic and Consular Staff in Tehran (United States of America v Iran),*[179]

[174] *Ibid.*

[175] Sicilianos, *supra* note 171.

[176] See *Arbitration Regarding the Iron Rhine Railway (The Kingdom of Belgium v The Kingdom of Netherlands)*, XVII UNRIAA 31 at para 222 (2005) [*Iron Rhine*]; *Pulp Mills*, *supra* note 1 at para 101; *Seabed* case, *supra* note 4 at para 111. On due diligence, see Ricardo Pisillo Mazzeschi, 'Due Diligence' e Responsabilità Internazionale degli Stati (1989); Jan Arno Hessbruegge, *The Historical Development of the Doctrines of Attribution and Due Diligence in International Law* 36 NYUJ Int'l L & Pol 265 (2004); Robert P Barnidge, Jr, *The Due Diligence Principle in International Law* 8 Int'l Community L Rev 81 (2006). Practically, the whole body of literature also points to the direction of due diligence. See Günther Handl, *Territorial Sovereignty and the Problem of Transnational Pollution* 69 Am J Int'l L 50 at 59 (1975); René Lefeber, Transboundary Environmental Intereference and the Origin of State Liability at 64–69 (1997); Dupuy, *supra* note 169 at 377; Alan Khee-Jin Tan, *Forest Fires of Indonesia: State Responsibility and International Liability* 48 Int'l & Comp LQ 826 at 833–34 (1999); Knox, *supra* note 74 at 296; Malgosia Fitzmaurice, *International Protection of the Environment* 293 Recueil des Cours de l'Academie de Droit International 9 at 289–90 (2001); Maria del Lujan Flores, *The Scope of Customary International Law on the Question of Liability and Compensation for Environmental Damage, in* Najeeb Al-Nauimi and Richard Messe (eds), International Legal Issues Arising under the United Nations Decade of International Law, 237 at 260–61 (1995); Birnie, Boyle, and Redgwell, *supra* note 31 at 147.

[177] See Lefeber, *supra* note 176 at 75.

[178] The concept of due diligence in international law can be traced back to the Alabama claims, see J Bassett Moore, History and Digest of the International Arbitrations to Which the United States Has Been a Party, at 495-583 (volume 1, 1898). It must, however be noted that the case did not clarify the meaning of the concept. For an account of the concept's history in the twentieth century, see Barnidge, Jr, *supra* note 176 at 92–121.

[179] *United States Diplomatic and Consular Staff in Tehran (United States of America v Iran),* [1980] ICJ Rep 3.

where it held that Iran had '[f]ailed altogether to take any "appropriate steps" to protect the premises staff and archives of the United States mission.'[180] It went on to state that the reason for the failure of the Iranian government was that it was aware of its international obligations, and it had the necessary means at its disposal so as to carry them out.[181] It becomes obvious from this dictum that the due diligence obligation is not something abstract but that it finds its content in the primary rule itself.

Due diligence has been discussed in a few international environmental law cases yet without yielding a clear statement as to its content.[182] The ILC also attempted to give a definition in the commentary of the Articles on Prevention. The ILC stated that '[d]ue diligence is manifested in reasonable efforts by a State to inform itself of factual and legal components that relate foreseeably to a contemplated procedure and to take appropriate measures, in timely fashion to address them.'[183] It is obvious from the language adopted that the ILC did not seek to give a precise definition of due diligence. Foreseeability is hard to define, the term 'timely fashion' is vague at best and the content of 'appropriate measures' is anybody's guess. The ILC went on to state that the standard of due diligence '[i]s that which is generally considered to be appropriate and proportional to the degree of risk of transboundary harm in the particular instance.'[184] The conclusion from the approach of the ILC is that one must look elsewhere to find the elements of the due diligence standard.

The advisory opinion of the Seabed Chamber of ITLOS marked some progress in this respect. When the chamber sought to reply to the question of the content of due diligence, it made some important remarks. Before establishing that the due diligence obligation to protect the environment has attained the status of customary law,[185] the chamber sought to identify its content. It first expressed the view that due diligence is a 'variable concept.'[186] Then it moved on to give a concrete meaning to the term in connection to the activities in the area. It identified as parts of the due diligence obligation the conduct of environmental impact assessment and the adoption of best environmental practices.[187] The chamber, in answering the third question posed in the request for an advisory opinion, tried to identify the content of the requirement for sponsoring

[180] *Ibid* at para 63.
[181] *Ibid* at para 68.
[182] The ICJ in *Pulp Mills, supra* note 1 at para 101, simply stated that '[t]he principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory.' Similarly, the Arbitral Tribunal in the *Iron Rhine* case, *supra* note 176 at para 222, affirmed the connection between prevention and due diligence.
[183] Prevention Articles, *supra* note 5 at 154.
[184] *Ibid*.
[185] *Seabed* case, *supra* note 4 at para 131.
[186] *Ibid* at para 117.
[187] The chamber noted that EIA is 'a relevant factor for meeting the sponsoring State's due diligence obligation.' *Ibid* at para 142. Similarly, it held that best environmental practices 'maybe seen to have become enshrined in the sponsoring State's obligation of due diligence' (at para 136).

states to adopt 'necessary and appropriate measures' to fulfil their responsibility under the convention. The chamber replied that these measures fell within the scope of the due diligence obligation of states[188] and that among these measures were the adoption of best environmental practices, the availability of recourse to compensation, and the obligation to conduct EIAs.[189] Despite the narrow confines of UNCLOS, the peculiarities surrounding the issue of activities in the area and the nature of the proceedings, it is worth taking into account the opinion of the chamber. It is the first clear statement by an international tribunal on the content of a due diligence obligation to ensure that no environmental harm will occur from a certain type of activity.

This interpretation of the due diligence obligation in the given context leads to the next question, which is whether due diligence consists of objective or subjective criteria. According to a part of the literature, the level of diligence must be measured against objective criteria only.[190] This essentially means that the state must comply with its obligations irrespective of whether it has the means to do so. The adoption of such a view would lead to an obligation that would not be so far off the idea of strict liability. It means that the focus lies with the result and not with the process of achieving the result. Therefore, the main reason why the majority of the literature has rejected this view is that it tends to obscure the dividing line between obligations of conduct and obligations of result.

The mainstream view is that due diligence contains both objective and subjective criteria, thus taking into account the demands of the international rules and the peculiarities of each state.[191] In any case, even though an objective view of due diligence would probably lead to a strict international environmental regulation, it must be borne in mind that the realities of international life do not warrant such a stance. The best illustration is the development of the notion of common but differentiated responsibilities. The idea that all states have common responsibilities, yet the differences on the level of their development must be taken into account was—until recently[192]—gaining ground in international environmental law.[193] Had the due diligence obligation been measured

[188] *Ibid* at para 219.
[189] *Ibid* at para 236.
[190] Ricardo Pisillo Mazzeschi, *Forms of International Responsibility for Environmental Harm, in* Francesco Francioni and Tullio Scovazzi (eds) International Responsibility for Environmental Harm, 19 at 24 (1991); Ricardo Pisillo Mazzeschi, *Due Diligence and the International Responsibility of States* 35 German YB Int'l L 9 at 42–43 (1992).
[191] Khee-Jin Tan, *supra* note 176; Birnie, Boyle, and Redgwell, *supra* note 31 at 112.
[192] Recent literature suggests that the concept of common but differentiated responsibilities has been challenged in the latest negotiation rounds on the climate regime. See Lavanya Rajamani, *The Changing Fortunes of Differential Treatment in the Evolution of International Environmental Law* 88(3) Int'l Aff 605 (2012); Thomas Deleuil, *The Common but Differentiated Responsibilities Principle: Changes in Continuity after the Durban Conference of the Parties* 21(3) RECIEL 271 (2012).
[193] For an excellent analysis of the notion, see Lavanya Rajamani, Differential Treatment in International Environmental Law, at 129–76 (2006).

solely by objective criteria, it would have been impossible to encompass the idea of differential treatment within the general no-harm rule.[194] It must be borne in mind that one of the criteria employed by the ICJ in the *United States Diplomatic and Consular Staff in Tehran* in determining the content of due diligence was whether the Iranian government had at its disposal the necessary means to carry out its obligations.[195]

Nevertheless, there are objective criteria that have found their way into the due diligence no-harm obligation. First and foremost, the prevention obligations themselves must be considered as objective criteria. They can be considered as basic elements of the no-harm rule, and states must exercise due diligence in regulating both public and private conduct following accepted international standards and practice.[196] The measures states must take can be identified, to a great extent, with the prevention obligations as they have been crystallized in international conventions, state practice, and international custom. Especially if one takes into account that these are obligations of result, one can conclude that they form the most important criterion in the determination of the diligent conduct of the state.

There are two problems, however, that dilute the objective nature of the prevention obligations as due diligence criteria. First, even though they are obligations of result, the result aimed for is not the prevention of environmental harm but the accomplishment of a series of actions (the conduct of EIA, the exchange of information, and so on) that will contribute towards the achievement of the general obligation to prevent such harm. Second, most of the prevention obligations are couched in favour of the state of origin, both in the relevant treaties and in their more crude and elliptic customary form. As it has been analyzed in the first part of this article, in most cases and in most crucial points (the decision on whether to proceed or not with a particular activity, the manner of exchange of information, the way consultations will be conducted, and the way the state that plans the activity informs the potentially affected states), it is the source state that has the last word.

The second objective criterion that is employed in identifying the objective side of due diligence are international environmental standards.[197] Environmental standards are essentially technical standards that denote the tolerable levels of pollution or the desirable levels of emissions or effluents and, generally speaking, any type of ecological standards that are set out in conventions, guidelines,

[194] Martti Koskenniemi, *Peaceful Settlement of Environmental Disputes* 60 Nord J Int'l L 73 at 80 (1991); Birnie, Boyle, and Redgwell, *supra* note 31 at 112.
[195] *Ibid* at para 68.
[196] See, for example, Pisillo Mazzeschi, *supra* note 176 at 169.
[197] Paolo Contini and Peter Sand, *Methods to Expedite Environmental Protection: International Ecostandards* 66 Am J Int'l L 37 (1972); Jan Willisch, State Responsibility for Technological Damage in International Law, at 75–110 (1987). See also Daniel Bodansky, *Rules vs. Standards in International Environmental Law* 98 Am Soc'y Int'l L Proc 275 (2004).

or national laws.[198] In contrast to the obligations of prevention, environmental standards cannot be viewed as being customary in nature, mainly because they change constantly depending on the understanding of the effects on the nature of any given activity. Moreover, environmental standards, sometimes, are not considered as binding even within a conventional framework. As Martti Koskenniemi correctly points out, '[t]echnical standards are "programmatory" in some sense that is difficult to define but that indicates that non-compliance with these standards is not by itself a wrongful act.'[199] What makes environmental standards even more susceptible to criticism as a solid means of identifying the diligent behaviour of a state is the fact that they often are the product of negotiations between states that many times work towards the lowest common denominator in order to reach an agreement.[200] This cannot possibly lead to an adequate level of protection of the environment.

If all of the factors that lead to an identification of the content of the due diligence obligation to prevent transboundary harm are combined, it becomes obvious that this obligation, as far as its general elements are concerned, is rather weak. As it has been analyzed in the first part of this article, the prevention obligations, despite their customary nature and their designation as obligations of result, obviously gives priority to the source state's right to authorize an activity, and, as a result, the rights of states that are possibly affected by the activity are set to the background. On the other hand, the elasticity of the due diligence requirement leads to the difficulty of identifying its precise content besides the general prevention obligations and the environmental standards.[201]

3. The Road Ahead: Responsibility, International Conventions, and Beyond

As far as both roles of prevention obligations are concerned, a few remarks on the rules of state responsibility are called for. First of all, the rules of state

[198] Environmental standards range from binding standards embedded in a treaty to purely non-binding standards that are not directed to states. There is also an intermediate category of standards adopted by technical bodies as 'recommendations' or 'guidelines.' One example of binding standards would be the persistent organic pollutants included in Annex C of the Stockholm Convention on Persistent Organic Pollutants, 2256 UNTS 119, the chemicals listed in Annex III. Article 5 of the Stockholm Convention stipulates that state parties should – at a minimum – take a number of measures listed in the article so as to reduce the releases of the substances included in Annex C. The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1046 UNTS 120 [London Convention] and its 1996 Protocol, 2006 ATS 11, would be another example. There are also non-binding guidelines issued under the auspices of the London Convention. See Guidelines for the Assessment of Wastes and Other Matter That May Be Considered for Dumping, <http://www.imo.org/blast/mainframemenu.asp?topic_id=1503&doc_id=7550>. The ISO 14000 series, which is a non-binding instrument and is not addressed to states, contains very detailed standards for a number of activities, <https://www.iso.org/obp/ui/#iso:std:iso:14001:ed-2:v1:en>.

[199] See Koskenniemi, *supra* note 194.

[200] Birnie, Boyle, and Redgwell, *supra* note 31 at 149.

[201] Pierre Marie Dupuy, La responsabilité internationale des états pour les dommages d'origine technologique et industrielle, at 261–64 (1977); Jutta Brunnée, *The Responsibility of States for Environmental Harm in a Multilateral Context-Problems and Trends* 34 Cahiers de Droit 827 at 834–48 (1993); Birnie, Boyle, and Redgwell, *supra* note 31 at 110–12,

responsibility are applicable in both cases: either when the prevention obligations are breached separately or when the due diligence obligation to prevent transboundary harm is breached. The prevention obligations do not pose, by their content and nature, any significant problems to the engagement of the rules on state responsibility. According to the ILC Articles on State Responsibility, the two main elements that are required so as to bring about the application of state responsibility are the existence of a breach of a rule of international law and that the breach is attributable to the state.[202] An issue that could arise in some instances is related to the second criterion—that of attribution. It is true that in some instances states chose to assign the conduct of an EIA to private companies. One such instance was the *MOX Plant* case where the environment agency of the United Kingdom assigned the conduct of a financial assessment to private companies.[203] The content of those reports also touched upon issues of environmental protection. Nevertheless, the issue of attribution was not discussed since it was considered that the elements of Articles 4 and 5 of the ILC Articles on State Responsibility were undeniably present.

It is important to note that under the articles on responsibility there is no requirement for actual damage to have occurred.[204] This is affirmed by a combined reading of Articles 2 and 31. Moreover, the ILC in its commentary uses as an example of a breach, a wrongful act that has been committed simply by the failure of a state to take the appropriate preventive measures so as to avoid harm.[205] By this example, the ILC sought to solidify the thesis that damage is not a constitutive element of international responsibility.

It is the primary rule that defines whether or not damage is required so as to establish a breach. As far as the prevention obligations are concerned, it seems that there is no requirement for damage to have occurred. None of the obligations presuppose an actual detrimental effect to the environment for them to be triggered and consequently breached. They all refer to the possibility of significant environmental harm. States themselves have affirmed the interpretation of the scope of the relevant obligations in their litigation efforts. In the *MOX Plant* cases, there was no actual harm. Ireland brought a claim before various tribunals that was based solely on the breach of preventive obligations. Before the

[202] See Articles on the International Responsibility of States for Wrongful Acts, reprinted in *Report of the International Law Commission on the Work of Its 53rd Session*, Official Records of the UN General Assembly, 56th Session, Supp no 10, Doc A/56/10 [Articles on State Responsibility]. The UN General Assembly took note of the articles in 2002, see UNGA Resolution, Doc A/RES/56/83 (28 January 2002).

[203] See Ireland's OSPAR Memorial, *supra* note 89 at paras 42–60.

[204] On the issue of damage in the context of state responsibility, see Bernhard Graefrath, *Responsibility and Damages Caused: Relationship between Responsibility and Damages* 185 Recueil des Cours de l'Academie de Droit Int'l 9 (1984).

[205] Articles on State Responsibility, *supra* note 202 at 225. In its commentary on Article 2, the ILC stated that '[w]hether a particular obligation is breached forthwith upon a failure to act on the part of the responsible State, or whether some further event must occur, depends on the content and interpretation of the primary obligation and cannot be determined in the abstract' (at 73).

OSPAR Convention tribunal, Ireland claimed that the United Kingdom had violated Article 9 of the OSPAR Convention, which pertained to the exchange of information.[206] Similarly, in its request for provisional measures before ITLOS, Ireland claimed that the United Kingdom had breached a number of prevention obligations under UNCLOS and general international law.[207] In the same vein, Argentina brought a case against Uruguay before the ICJ concerning the construction of pulp mills on the River Uruguay at a time when the mills were not operational. Argentina claimed that Uruguay had breached its obligations to notify, exchange information, and co-operate in the process of issuing preliminary authorizations for construction.[208] All of these obligations to prevent transboundary harm formed the basis of the claim of Argentina without there being actual harm in the River Uruguay.

The basic secondary obligations of the state that has breached either a prevention obligation or the general obligation not to cause transboundary harm are to cease the wrongful act, to provide assurances and guarantees of non-repetition, and to make full reparation.[209] The injured state may accordingly request restitution, compensation, or require satisfaction or some combination of the three.[210] What is rather problematic in the context of international environmental law is the issue of countermeasures.[211] The preconditions for the invocation of countermeasures can be found in Articles 49–54 of the ILC Articles on State Responsibility. In environmental law, there is an inherent difficulty in the exercise of countermeasures in the same field. It seems that in environmental law states cannot take countermeasures by breaching an obligation that pertains to the protection of the environment.[212] This conclusion is derived mainly by the idea that the obligation to protect the environment is one of an absolute character.[213] Of course, this does not mean that the environmental obligations of states cannot be seen through a prism of bilateralism. The important point in this connection is that environmental obligations work towards the protection of the

[206] See Ireland's OSPAR Memorial, *supra* note 89 at paras 93–103.

[207] *Seabed* case, *supra* note 4 at para 55. Ireland claimed that the United Kingdom had breached its obligation to co-operate with Ireland, its obligation to conduct an EIA and its obligation to protect the marine environment.

[208] *Pulp Mills, supra* note 1, Application Instituting Proceedings, <http://www.icj-cij.org/docket/files/135/10779.pdf>.

[209] Articles on State Responsibility, *supra* note 202, Articles 30 and 31.

[210] *Ibid,* Articles 30, 31, 34–37.

[211] On the issue of countermeasures, see Linos Alexander Sicilianos, Les réactions décentralisées à l'illicite (1990); Articles on State Responsibility, *supra* note 202 at 324–49. For a general view on unilateral action in international environmental law, see Daniel Bodansky, *What's So Bad about Unilateral Action to Protect the Environment?* 11 Eur J Int'l L 339 (2000).

[212] See Laurence Boisson de Chazournes, *La mise en oeuvre du droit international dans le domaine de la protection de l'environnement: Enjeux et defis* Revue General de Droit International Public 37 at 44 (1995).

[213] See Linos Alexander Sicilianos, *The Classification of Obligations and the Multilateral Dimension of the Relations of International Responsibility* 13 Eur J Int'l L 1127 at 1132–38 (2002); Malgosia Fitzmaurice and Olufemi Elias, Contemporary Issues in the Law of Treaties, at 147–49 (2005).

environment as a whole. Exactly because states are unable to take countermeasures in the field of environmental law, they tend to turn to the solution of economic and trade measures. The problem with this approach is that it has, so far, led to a conflict with other rules of international law, especially those pertaining to international trade. The experience from the two cases brought before the panels to the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO), regarding trade restrictions imposed by the United States,[214] shows that it is rather hard for states to sustain such policies when they are in conflict with other obligations in the field of trade. The United States tried to classify its measures under the exception provided by GATT Article XX,[215] yet in both instances it failed to convince the panels that the measures were not in violation of the GATT and WTO rules.[216] The same result can be easily envisaged in the context of both the North American Free Trade Agreement and the European Union (EU).[217]

Of course, unilateral action that can be seen as countermeasures may have significant positive effects despite a conflict with other international obligations. The EU Emissions Trading Scheme (ETS) includes as of 1 January 2012 the aviation industry, including all flights operated from and towards the EU.[218] This move has been partly in response to the inaction of the International Civil Aviation Organization (ICAO) to take steps to decide on an emissions trading scheme.[219] The unilateral action of the EU has been discussed in the literature

[214] The first case was related to the prohibition of import of tuna, while the second to the prohibition of import of shrimp. *See United States – Restrictions on Imports of Tuna*, GATT Doc DS/29/R 33 (16 June 1994); *United States – Import Prohibition of Certain Shrimp and Shrimp Related Products*, WTO Doc WT/DS58/R (1998) [*Shrimp-Turtle* case]. These cases have been accompanied by a voluminous output of academic opinion. See, among many others, John H Jackson, *Comments on Shrimp/Turtle and the Product/Process Distinction* 11 Eur J Int'l L 303 (2000); Robert Howse, *The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate* 27 Colum J Envtl L 491 (2002).

[215] Paragraphs b and c of Article XX provide for an exception as far as legislation is concerned that focuses on the protection of human health and of flora and fauna or that deals with non-renewable natural resources. See General Agreement on Tariffs and Trade, 1867 UNTS 187.

[216] It must be clear however that the WTO Appellate Body in the *Shrimp/Turtle* case overturned the rationale of the panel since it held that the legislation enacted by the United States did indeed fall within the ambit of Article XX. See *Shrimp-Turtle* case, *supra* note 214 at para 10. This means that there is room for some optimism for the future since the holding of the Appellate Body signifies a slight turn to the policy of WTO showing some signs of tolerance in terms of the states' environmental policies. See G Shaffer, 'United States-Import Prohibition of Certain Shrimp and Shrimp Related Products' 93 Am HJ Int'l L 502 at 513 (1999); and Rüdiger Wolfrum, *Means of Ensuring Compliance with and Enforcement of International Environmental Law* 272 Receuil de Cours de l'Academie de Droit International 25 at 58–77 (1998).

[217] Boisson de Chazournes, *supra* note 212. North American Free Trade Agreement, 32 ILM 289, 605 (1993).

[218] EC Directive 2008/101 so as to Include Aviation Activities in the Scheme for Greenhouse Gas Emission Allowance Trading within the Community, [2008] OJ L8/3, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:008:0003:0021:EN:PDF>, Article 3(c).

[219] See International Civil Aviation Organization (ICAO) Resolution A37/19 Consolidated Statement of Continuing ICAO Policies and Practices Related to Environmental Protection, available at <http://legacy.icao.int/env/A37_Res19_en.pdf>.

mainly in terms of its compatibility with WTO law.[220] The results of the EU's unilateral acts (which may well be seen as countermeasures),[221] however, have been to bolster the support for a solution to be given within the ICAO framework. The EU, in the face of reaction to the implementation of the ETS took a step back and derogated temporarily from the directive. In what it termed as a 'stop the clock' policy, it would not implement the international aspects of the directive for one year. This decision was taken in good faith so as to allow for a global solution to be sought in the forthcoming ICAO Assembly session in the fall of 2013.[222]

What this analysis demonstrates is that the secondary rules of state responsibility do not pose any problems as such to the implementation of the primary obligations. It has been argued in the literature that state responsibility is ill designed so as to meet the challenges posed by the issue of transboundary pollution.[223] If state responsibility is considered as a means to address the major issues of global environmental governance, it surely is not enough. If it is seen, however, as a useful tool that can address specific disputes and even have a deterrent effect on the conduct of states, then it poses no serious problems. With the exception of the issue of countermeasures, it seems that the problem does not lie with the rules on responsibility but, rather, as it has been shown in the first part of this article, with the content of the primary rules. The problem of the content of the prevention obligations as autonomous obligations is that more often than not they are vague and most of the time they leave the last word to the state that implements the activity. These issues must be addressed by states as well as by the courts and tribunals whenever they have the opportunity to do so. A clarification of the prevention obligations and a solidification of their content could lead to the more effective application of the rules of state responsibility.

[220] Joshua Meltzer, *Climate Change and Trade: The EU Aviation Directive and the WTO* 15(1) J Int'l Econ L 111 (2012); Lorand Bartels, *The WTO Legality of the Application of the EU's Emission Trading System to Aviation* 23 Eur J Int'l L 429 (2012).

[221] André Nollkaemper, *EU Aviation Scheme as a Countermeasure against Other ICAO Member States,* <http://www.sharesproject.nl/eu-aviation-scheme-as-a-countermeasure-against-other-icao-member-states/>.

[222] See Proposal for a Decision of the European Parliament and of the Council Derogating Temporarily from Directive 2003/87/EC of the European Parliament and of the Council Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community, <http://ec.europa.eu/clima/policies/transport/aviation/docs/com_2012_697_en.pdf>.

[223] Malgosia Fitzmaurice, after admitting that the effectiveness of the responsibility rules is hampered, at least partly, by the vagueness of the primary rules, goes on to note that: 'the goals of state responsibility are not focused directly on promoting compliance with environmental norms. Rather, state responsibility is reactive and aimed at setting up a system of dealing with the consequences of breaches of norms of international law.' See Malgosia Fitzmaurice, *International State Responsibility and Liability, in* Daniel Bodansky, Jutta Brunée, and Ellen Hey, *supra* note 41 at 1010, 1034. Bodansky has also expressed the view that responsibility should play a minor role in environmental law. See Daniel Bodansky, The Art and Craft of International Environmental Law, at 247 (2011).

The pertinent question regarding the clarification of the content of the prevention obligation is whether this could be done through an international treaty. The most obvious opportunity came when the ILC concluded the Articles on Prevention of Transboundary Harm from Hazardous Activities (Prevention Articles).[224] No universal support from transforming the articles into a global convention can be discerned. When the ILC submitted the Prevention Articles, the Sixth Committee of the UN General Assembly took note of the articles but did not proceed to any further action. Whenever the opportunity has arisen to discuss the future of the articles in the Sixth Committee, two main trends may be discerned. According to the first one, supported by major industrial and economic powers and a number of strong developing states, the articles would better serve their purpose if they were left as they stand.[225] This view is a result of either doubts over the possibility of success of a broad international convention or a belief that the articles are a progressive development of international law and are not ripe yet to be transformed into a convention. The second trend favours an international convention that would contain both the articles on prevention and the set of principles concluded by the ILC on allocation of loss.[226] This trend comes, mainly, from Latin American states. The bottom line is that for the time being there is no support for an international convention on prevention. The topic is again on the agenda of the Sixth Committee for 2013. Unless states change dramatically their positions, it seems that again no concrete decision will be taken.

A way to seek for further clarification of the content of the due diligence rule and of the prevention obligations would be by looking at their effect in informing the content of future international conventions. These conventions would, in turn, provide for more substance in the prevention obligations. This could be done if states were taking into account their prevention obligations in negotiating and concluding treaties that have a transboundary component, as opposed to having a global character. A recent example would be the Protocol for the Protection of the Caspian Sea against Pollution from Land-Based Sources and Activities to the Convention for the Protection of the Marine Environment of the Caspian Sea.[227] The protocol contains a basic due diligence obligation[228] as well

[224] Prevention Articles, *supra* note 5.

[225] See comments by the representatives of Canada, New Zealand, and Australia, China, the United States, and Russia in the Sixth Committee. See UNGA Sixth Committee, 62nd Session, Summary Record of the Twelfth Meeting, UN Doc A/C.6/62/SR 12 (12 December 2007) at paras 14, 24, 28, and 53 respectively. Also comments by the United States in 2010. UNGA Sixth Committee, 65th Session, Summary Record of the Seventeenth Meeting, UN Doc A/C.6/65/SR.17 (2 December 2010) at para 20.

[226] See comments by the representatives of Portugal and Argentina in *ibid* at paras 19–20 and 26 respectively as well as comments by the representative of Mexico at para 6.

[227] Protocol for the Protection of the Caspian Sea against Pollution from Land-Based Sources and Activities to the Convention for the Protection of the Marine Environment of the Caspian Sea, <http://www.tehranconvention.org/IMG/pdf/Protocol_on_Pollution_from_Land_Based_Sources_and_Activities.pdf>.

[228] *Ibid,* Article 4(1).

as a number of prevention obligations that are obviously in the spirit of the general prevention obligations.[229] The architecture of the protocol betrays a reliance on the prevention obligations in shaping its blueprint. It must, however, be noted that the impact of the prevention obligations does not appear in instruments that follow a considerably different approach. The UNFCCC, the Vienna Convention on the Depletion of the Ozone Layer, or the Convention on Long Range Transboundary Air Pollution and its protocols show that states often favour instruments that address environmental issues away from the contours of the law of responsibility.[230] Of course, the fact that these conventions employ organs such as implementation committees does not mean that issues of responsibility might not arise in the future.

A final remark must be made regarding the question of what lies beyond the general due diligence and the individual prevention obligations. It has been noted already that it would be easy for the state of origin to comply with their obligations due to their weak content and due to the inadequacy of the due diligence standard. It follows that it could be quite possible that damage may arise while the state of origin has complied with its obligations and will not be able to be held responsible. This point is implicit in the comments in the discussions in the Sixth Committee where it has been stated that any international convention on prevention must contain rules on the allocation of loss in case no responsibility arises. The topic of liability is too broad to be discussed here, but it is worth noting that the possibility of opening up the question of liability has been shown in the ITLOS advisory opinion. The chamber, in replying to the question on what is the status of liability in international law replied that '[a] gap in liability which might occur in such a situation cannot be closed by having recourse to liability of the sponsoring State under customary international law.'[231] This statement shows the real impact of having weak, poorly defined, and inadequate prevention obligations. There is no fallback position in international law since there is no customary rule, and the ILC failed to gather support for its work on liability. This is the point that goes beyond the limits of prevention. Stronger and clearer prevention obligations could serve as a sufficient barrier against falling too often in the, earlier mentioned, 'gap' of liability.

[229] *Ibid,* Articles 4(2)(c), (d), and (e), 11, 12.

[230] See Geir Ulfstein and Robin Churchill, *Autonomous Institutional Arrangements in Multilateral Environmental Treaties: A Little-Noticed Phenomenon in International Law* 94 Am J Int'l L 623 (2000); Jutta Brunnée, *Reweaving the Fabric of International Law? Patterns of Consent in Environmental Framework Agreements, in* Rüdiger Wolfrum and Volker Röben (eds) Developments of International Law in Treaty Making, at 101 (2005); Urlich Beyerlin, Peter T Stoll, and Rudiger Wolfrum (eds), Ensuring Compliance with Multilateral Environmental Agreements: Academic Analysis Views from Practice (2006); Malgosia Fitzmaurice, *Compliance with Multilateral Environmental Agreements* 20 Hague YB Int'l L 19 (2007).

[231] *Seabed* case, *supra* note 4 at para 209.

IV. CONCLUSIONS

International law, on the one hand, provides for a series of autonomous prevention obligations and, on the other, a due diligence obligation to prevent transboundary harm where the prevention obligations play an important role. As far as the prevention obligations are concerned in the context of their autonomous nature, it can be safely maintained that they are part of customary law. Nevertheless, their content varies depending on the context in which they are employed, and the result is that the picture that emerges is rather vague. The obligation to conduct an EIA, for example, leaves a wide margin of discretion to the state of origin in the sense that it has the final word when the time comes to take a decision so as to render the activity operational. Despite a number of guarantees on the decision-making process that seek to safeguard the interests of the potentially affected states, the decision does indeed rest with the state of origin without significant substantive restraints. The same is true for the obligation to exchange information, which appears in a fragmented manner in the relevant conventions. The content of the information that states must exchange is subject to a number of exceptions that seek to safeguard national and industrial security considerations. Similarly, the obligation to conduct consultations seems to suffer from the same lack of coherence and clarity. The fact that the state of origin may proceed with the plan activity without securing the consent of the potentially affected states makes some sense indeed. Nevertheless, it may also render the process of consultations a mere formality.

It is this lack of strength and clarity of the prevention obligations that renders the content of the general no-harm obligation equally weak. The due diligence obligation appears to be problematic since it consists of the prevention obligations. Moreover, the sense of stability that international environmental standards can provide for is compromised by their lack of normative weight. Overall, it seems that states can fulfil their due diligence obligation rather easily. This is not to say that there has not been significant progress during the last years towards the strengthening of the obligations. The fact that states are more willing than ever to litigate on these matters testifies to the growing awareness of the problems that relate to the prevention obligations. The situation where a state has fulfilled its due diligence obligation and nevertheless transboundary environmental harm does occur is the most troubling aspect of the whole matrix of obligations.

It seems that the task international law faces is twofold. On the one hand, strengthening the obligations to prevent transboundary harm must become a priority. On the other hand, an effective international system of liability must be developed so as to cover the instances where damage occurs and the engagement of the rules on state responsibility is not an option since the primary obligation has not been breached. Only if these two goals are met will the states develop more nuanced, detailed, and, more importantly, efficient rules governing the prevention of transboundary harm.