MARTINUS NIJHOFF PUBLISHERS

The International Journal of Marine and Coastal Law 27 (2012) 449–480

THE INTERNATIONAL JOURNAL OF MARINE AND COASTAL LAW

brill.nl/estu

Environmental Impact Assessment in Areas beyond National Jurisdiction

Alex G. Oude Elferink*
Netherlands Institute for the Law of the Sea, Faculty of Law, Economics and Governance Utrecht University, The Netherlands

Abstract
Environmental impact assessment (EIA) has become widely accepted as an indispensable instrument to manage and control negative impacts of human activities on the environment. The present report analyzes the general legal framework for EIA in maritime areas beyond national jurisdiction (ABNJ) and also considers the regime for assessments in respect of specific activities in ABNJ. The report concludes that these existing frameworks will have to be taken into account if it were to be decided to develop a global instrument on EIA for all activities in ABNJ. The report provides a number of suggestions to move the current international debate on EIA in ABNJ forward.

Keywords
Area; high seas; law of the sea; governance; areas beyond national jurisdiction (ABNJ); environmental impact assessment (EIA)

Introduction

Environmental impact assessment (EIA) has become widely accepted as an indispensable instrument to manage and control negative impacts of human activities on the environment. The requirement of EIA in respect of the marine environment is recognized in Article 206 of the United Nations Convention on the Law of the Sea (hereinafter LOSC or the Convention).[1] Many States have implemented the obligation contained in Article 206 for areas under national jurisdiction. By contrast, this is much less the case for areas beyond national jurisdiction (ABNJ).[2] As one recent publication on the legal regime

* The author would like to thank P Drankier and E Molenaar and the participants at the Symposium on Biological Diversity and Governance of Areas Beyond National Jurisdiction held at Utrecht University on 8 July 2011 for their comments on an earlier version of this report. The content of this report remains the sole responsibility of its author.

[1] Adopted on 10 December 1982; entry into force 16 November 1994; 1833 UNTS 396.

[2] In accordance with the relevant legal framework provided by the LOSC, the present study

DOI: 10.1163/157180812X636598

of ABNJ observes: "the incidence of environmental impact assessment processes and ongoing monitoring of the effects of marine pollution in marine areas beyond national jurisdiction is relatively low".[3]

EIA is currently one of the issues under consideration in the *Ad Hoc* Open-ended Informal Working Group to Study Issues Relating to the Conservation and Sustainable Use of Marine Biological Diversity Beyond Areas of National Jurisdiction (BBNJ Working Group). EIA for ABNJ is also under consideration in other international fora, such as the International Seabed Authority (ISA) and the Convention on Biological Diversity (CBD).[4]

One of the four research questions of the Study of Biological Diversity and Governance of the High Seas which has been executed by the Netherlands Institute for the Law of the Sea for the Netherlands Ministry of Economic Affairs, Agriculture and Innovation (EL&I) was to determine the options to reinforce the current regime of EIA for ABNJ. In particular, research question 4 of the Study asked to establish how a system of prior EIA for all human activities in ABNJ could be made legally binding. In addition, the research question indicated that such a system should be built on existing sectoral and regional initiatives.[5]

The formulation of an answer to the first part of this research question might seem to be straightforward. A system of prior EIA can be made compulsory through the adoption of a legally binding instrument. This seemingly straightforward answer at the same time points to the complexity of the matter. The adoption of a legally binding instrument of global reach requires the participation of the whole international community. As will be set out in the section on EIA and customary international law below, a general obligation to carry out EIAs under customary law already exists. However, it may be difficult for States to agree on the question as to how more specific content should be given to this general obligation. Second, for a legally binding instrument to actually become binding, it will have to enter into force. To become an effective instrument it would be preferable that a large majority of States under whose jurisdiction and control activities are carried out in ABNJ would become a party to it.

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will refer to the high seas and the Area as appropriate where these separate components of ABNJ are intended.

[3] R Warner, *Protecting the Oceans Beyond National Jurisdiction; Strengthening the International Law Framework* (Martinus Nijhoff Publishers, Leiden, 2009) 51.

[4] Adopted on 5 June 1992; entry into force 29 December 1993; 1760 UNTS 143.

[5] *Specifications of the Study of Biological Diversity and Governance of the High Seas* (National Service for the Implementation of Regulations, February 2009), 13.

The second part of the research question envisages that a new instrument should be built on existing sectoral and regional initiatives. To assess the significance of these initiatives, a number of sectoral and regional initiatives are discussed in the section of this report addressing EIA in the context of specific instruments. It should be noted that this is not an exhaustive discussion of such sectoral and regional initiatives. It is considered that for the moment it is sufficient to provide a sample of such initiatives as this allows identification of the main issues which are raised by these instruments in relation to a new global instrument on EIA. A final section of the report offers a synthesis of the preceding analysis and provides points for discussion in respect of the further elaboration of the regime for EIA in ABNJ.

The present report employs the definition of EIA contained in the 1987 Goals and Principles of Environmental Impact Assessment of the United Nations Environment Programme (UNEP) as a working definition.[6] The UNEP Goals and Principles define EIA as "an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development". This definition refers to *planned* activities. A similar approach is contained in research question 4 of the present project, which refers to *prior* assessment. It should be noted that international law also contains obligations to assess the impacts of ongoing activities. This is, for instance, the case for fisheries. The existence of this latter obligation does not necessary imply the existence of an obligation to carry out a prior EIA.[7] At the same time, obligations to monitor ongoing activities form an important complement in cases in which an EIA has been carried out before the start of an activity.

The present report also briefly discusses the instrument of strategic environmental assessment (SEA) in view of its significance for ABNJ. The CBD's Draft Guidance on Biodiversity-inclusive Strategic Environmental Assessment provides the following description of SEA and its relationship to EIA:

> Strategic environmental assessment has been defined as 'the formalized, systematic and comprehensive process of identifying and evaluating the environmental consequences of proposed policies, plans or programmes to ensure that they are fully included and appropriately addressed at the earliest possible stage of decision-making on a par with economic and social considerations'. Since this original definition the field of SEA has rapidly developed and expanded, and the number of definitions of SEA has multiplied accordingly. SEA, by its nature, covers a wider range of activities or a wider area and often over a longer time span than the environmental impact assessment of projects. SEA might be applied to

[6] Hereinafter UNEP Goals and Principles.
[7] See also *infra* text at note 59 and following.

> an entire sector (such as a national policy on energy, for example) or to a geographical area (for example, in the context of a regional development scheme). SEA does not replace or reduce the need for project-level EIA (although in some cases it can), but it can help to streamline and focus the incorporation of environmental concerns (including biodiversity) into the decision-making process, often making project-level EIA a more effective process. SEA is nowadays commonly understood as being proactive and sustainability-driven, whilst EIA is often described as being largely reactive.[8]

EIA and Customary International Law[9]

The International Court of Justice considered whether an obligation exists under customary international law to carry out EIAs in its judgment of 20 April 2010 in the *Pulp Mills* case.[10] The Court in paragraph 204 of the judgment observes:

> it may now be considered a requirement under general international law to undertake an environmental impact assessment where 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. Moreover, due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works liable to affect the régime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works.

This observation by the Court is formulated with reference to the specific situation of the case before it, that is, a transboundary context. The case concerned an industrial activity in the territory of Uruguay that had an impact on the waters of the boundary river between Uruguay and Argentina and the territory of Argentina beyond the river. This might raise the question whether the findings of the Court on EIA are also applicable to activities in ABNJ. There are two aspects to this issue.

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[8] Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment (UNEP/CBD/ COP/8/ 27/Add.2 of 9 January 2006), Annex II, para. 7 (footnote not included).

[9] Rules of customary law are in principle binding on all States. This explains why it is relevant to not only look at international agreements and other instruments, but also at the content of customary international law.

[10] Case concerning Pulp Mills on the River Uruguay (*Argentina* v. *Uruguay*); hereinafter *Pulp Mills*. Judgment available at http://www.icj-cij.org/docket/files/135/15877.pdf (last accessed 25 February 2012).

First, the obligation of EIA in any case is applicable to activities in ABNJ which may have a significant adverse impact in a transboundary context, that is, the activity also has an impact on areas within national jurisdiction.

Second, does the finding of the Court imply that the obligation of EIA also extends to activities in ABNJ which only have a significant adverse impact in ABNJ? The answer in this case is more complex. Although in this case there is no question of a transboundary context in a strict sense, it could be argued that adverse impacts of activities in ABNJ by definition affect the interests of other States and a shared resource and as such this situation has to be equated to a situation involving a transboundary context *stricto sensu*. That conclusion is supported by the Court's reasoning on due diligence, and the duty of vigilance and prevention cited above. According to the Court these considerations in the present case imply the duty to undertake an EIA if activities are liable to affect the regime of the River Uruguay or the quality of its waters.

The Court also discusses due diligence and the principle of prevention in paragraph 101 of its judgment where it observes:

> The Court points out that the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory. [. . .] A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State. This Court has established that this obligation "is now part of the corpus of international law relating to the environment" (*Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, p. 242, para. 29).

In paragraph 29 of the Advisory Opinion the Court observed:

> The existence of the general obligation of States to ensure that activities within their *jurisdiction and control* respect the environment of other States or of *areas beyond national control* is now part of the corpus of international law relating to the environment.[11]

The findings of the Court in the *Pulp Mills* case, read in conjunction with its Advisory Opinion concerning the *Legality of the Threat or Use of Nuclear Weapons* imply that there is a general obligation for States to carry out an EIA to avoid that activities under their jurisdiction and control cause significant damage to the environment of ABNJ.[12]

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[11] Emphasis provided.

[12] See also Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities*

The Court in its judgment in the *Pulp Mills* case also considered whether or not, apart from a general obligation to carry out an EIA under international law, international law also prescribes this obligation in more detail. The Court concluded that general international law did not "specify the scope and content of an environmental impact assessment".[13] However, the Court then proceeded to indicate the minimum requirements for an EIA in order for a State to meet its obligations in this respect, observing that:

> it is for each State to determine in its domestic legislation or in the authorization process for the project, the specific content of the environmental impact assessment required in each case, having regard to the nature and magnitude of the proposed development and its likely adverse impact on the environment as well as to the need to exercise due diligence in conducting such an assessment. The Court also considers that an environmental impact assessment must be conducted prior to the implementation of a project. Moreover, once operations have started and, where necessary, throughout the life of the project, continuous monitoring of its effects on the environment shall be undertaken.[14]

In considering the obligations of the parties in this dispute in respect of EIA, the Court also referred to the relevance of the UNEP Goals and Principles. The Court concluded that the UNEP Goals and Principles were not binding on the parties, but had to be taken into account by them.[15] However, this conclusion on the relevance of the UNEP Goals and Principles is not necessarily applicable to other cases. The Court found that the Goals and Principles were relevant in the light of the specific obligations in force between the parties, *i.e.*, those contained in Article 41(a) of the 1975 Statute of the River Uruguay.[16]

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in the Area; Advisory opinion of 1 February 2011 (available at http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf (last accessed 25 February 2012)), para. 148.

[13] *Pulp Mills* case, judgment of 20 April 2010, para. 205.

[14] *Ibid*.

[15] *Ibid*.

[16] *Ibid*. Article 41 provides that:

> Without prejudice to the functions assigned to the Commission in this respect, the parties undertake:
>
> (a) to protect and preserve the aquatic environment and, in particular, to prevent its pollution, by prescribing appropriate rules and [adopting appropriate] measures in accordance with applicable international agreements and in keeping, where relevant, with the guidelines and recommendations of international technical bodies[.]

EIA in the Context of Specific Instruments

Introduction

The present section discusses the provisions on EIA contained in a number of international agreements and legally non-binding international instruments and developments in respect of EIA in ABNJ in a number of international bodies. This is not intended to be an exhaustive discussion, but it is considered to be sufficient to identify the main issues and questions which exist in respect of the options and challenges in connection with developing a global legally binding instrument on EIA.

The LOSC

Generally Applicable Provisions

The LOSC deals with the general obligation to carry out environmental assessments in its Article 206, which reads:

> *Assessment of potential effects of activities*
>
> When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in Article 205.

Article 206 is applicable to areas within and beyond national jurisdiction. The article refers to "planned activities under their jurisdiction or control" and to "harmful changes to the marine environment". The reference to "jurisdiction or control" also covers activities beyond the maritime zones of coastal States and includes activities which are carried out by the State concerned and its nationals. This also includes ships, aircraft and other installations and structures which are registered in that State. The term 'marine environment' refers to the entire marine environment. This includes the marine environment of ABNJ.

Article 206 is not only applicable to activities resulting in pollution of the marine environment in the strict sense, but also to activities resulting in significant and harmful changes to the marine environment. This latter provision gives Article 206 a broader scope of application than would otherwise be the case.

Article 206 leaves considerable discretion to individual States. They shall assess these effects "as far as practicable" and if they "have reasonable grounds

for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment". Craik has observed in respect of the qualification "reasonable grounds" that as a matter of practice:

> The state of origin will likely be given some leeway in determining whether reasonable grounds exist, but this is no different from the deference normally granted to a domestic agency in its determination of whether significant impacts are "likely" to occur.[17]

The reference to "as far as practicable" does not qualify the obligation to carry out an assessment but is applicable in determining the content of the assessment in a specific case.[18]

Craik has observed that it may be taken as significant that Article 206 uses the term "assess" instead of the term "environmental impact assessment".[19] He concludes that:

> by referring to the more ambiguous term "assess", Article 206 does not fix the requirements for an EIA, but rather allows states to make such a determination in accordance with their capabilities and their domestic legislation—a matter of considerable importance to developing states and states in transition whose capacity to carry out EIAs in many instances would be lower than developed states, particularly in 1982, when [the LOSC] was adopted.[20]

Whether this statement accurately reflects the current obligations of States in respect of EIA under the LOSC Convention is open to question. In that respect, reference can be made to the statement of the International Court of Justice in the *Pulp Mills* case discussed above on the obligatory nature of EIA under general international law. Rules of customary international law, including rules of international environmental law, will have to be applied by a State Party to the Convention to the extent these rules have become binding on that State.[21]

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[17] N Craik, *The International Law of Environmental Impact Assessment* (Cambridge University Press, Cambridge, 2008) 98–99.

[18] See also *ibid*., 99, concluding that the most likely reason for the inclusion of this provision is to account for the differing capabilities of States. However, in that case a more direct reference to the differing capabilities of States would also have been an option and there may be other reasons explaining the choice for the wording as included.

[19] *Ibid*.

[20] *Ibid*.

[21] See Vienna Convention on the Law of Treaties, Article 31(3)(c); adopted on 23 May 1969; entry into force 27 January 1980; 1155 UNTS 331.

Article 206 of the LOSC does not specify the steps a State is required to take once it has at its disposal the outcome of an assessment. However, in the light of the obligations of States to prevent, reduce and control pollution of the marine environment contained in, *inter alia*, Article 194 of the Convention, such requirements do exist under the Convention. In view of the outcome of an assessment, a State will be required to take all the necessary measures to ensure that it meets its obligations under the Convention in this respect. The precautionary approach may be relevant for States in this context in view of the fact that information on the possible impacts of activities on the marine environment in ABNJ may be limited.

The precautionary approach is not included in the LOSC. This is explained by the fact that the precautionary approach was developed after the adoption of the Convention in 1982. The fact that the precautionary approach is not contained in the Convention does, however, not mean that it is irrelevant in the context of the Convention. As was observed above, customary international law is relevant to interpreting the rights and obligations of States Parties to the Convention.[22]

The relevance of the precautionary approach for treaty instruments that were adopted before the approach was developed, was recently confirmed by the International Court of Justice in the *Pulp Mills* case. In a discussion of an argument by Argentina on the burden of proof the Court observed:

> Regarding the arguments put forward by Argentina on the reversal of the burden of proof and on the existence, vis-à-vis each Party, of an equal onus to prove under the 1975 Statute, the Court considers that while a precautionary approach may be relevant in the interpretation and application of the provisions of the Statute, it does not follow that it operates as a reversal of the burden of proof.[23]

A general statement on the content of the precautionary approach is contained in Principle 15 of the Rio Declaration on Environment and Development adopted in Rio de Janeiro in 1992. Principle 15 reads:

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

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[22] The customary law status of the precautionary approach is further discussed in the Report *Governance Principles for Areas Beyond National Jurisdiction*, which is also included in this Special Issue.

[23] *Pulp Mills*, case, judgment of 20 April 2010, para. 164.

This general statement on the content of the precautionary approach reflects customary international law.[24]

Article 206 of the Convention requires States to communicate reports of the results of assessments to the competent international organizations, which should make them available to all States. This provision provides an important mechanism for determining to what extent States are complying with their obligations under Article 206. The reference to the competent international organizations in this context indicates that reports in respect of different activities may be communicated to different international organizations. This approach poses the risk that information on various activities is considered in isolation and that cumulative effects are overlooked. Until recently States did not report to the Division of Ocean Affairs and the Law of the Sea of the Secretariat of the United Nations on the implementation of this aspect of Article 206 of the Convention.[25] The 2010 United Nations General Assembly Resolution on Oceans and the Law of the Sea requests the Secretary-General to provide information on EIAs with respect to activities in ABNJ on the basis of information provided by States and competent international organizations.[26] This reporting could assist in monitoring the implementation of Article 206 for ABNJ and could be a first step in setting up a system in which cumulative effects of activities will be taken into account as appropriate.

Article 204 of the Convention on monitoring the risks or effects of pollution is relevant to determining the effects after activities have started. Article 204(2) requires States to:

> keep under surveillance the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.

EIA in Relation to Specific Activities

The Convention provides the basis for the elaboration of more detailed rules on EIA in the case of mining activities in the Area. The general obligation to carry out EIAs contained in Article 206 of the LOSC is not further elaborated in the Convention in respect of other specific activities in ABNJ.

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[24] See P Birnie, A Boyle and C Redgwell, *International Law and the Environment* 3rd ed. (Oxford University Press, Oxford, 2009) 159–164, especially at 163; A Trouwborst, *Precautionary Rights and Duties of States* (Martinus Nijhoff Publishers, Leiden, 2005) 286–287.

[25] E-mail to the author of the report from L Santosuosso of the Division of 11 December 2010.

[26] Oceans and the Law of the Sea; Resolution adopted by the General Assembly on 7 December 2010 (A/RES/65/73 of 127 March 2011) para. 167; see also *infra*.

Under the Convention the ISA is entrusted with the task of organizing and controlling mining activities in the Area.[27] In that connection the ISA is required to adopt appropriate rules and regulations and procedures for the protection of the marine environment from harmful effects which may arise from mining activities in the Area.[28] Article 145 in this connection, *inter alia*, refers to rules, regulations and procedures to prevent, reduce and control interference with the ecological balance of the marine environment. This requirement implies a need to assess the impacts of mining activities on the marine environment and to establish which measures are required to maintain the ecological balance of the marine environment.

The importance of environmental protection in the context of mining activities in the Area is further recognized in the Implementation Agreement on Part XI of the Convention, which was adopted in 1994.[29] The Preamble to the Agreement recalls the importance of the Convention for the protection and preservation of the marine environment and the growing concern for the global environment. The Agreement also introduces an additional condition for plans of work in respect of mining activities in the Area.[30] An application to the ISA for approval of a plan of work:

> shall be accompanied by an assessment of the potential environmental impacts of the proposed activities and by a description of a programme for oceanographic and baseline environmental studies in accordance with the rules, regulations and procedures adopted by the Authority.[31]

In 2000 and 2010 the ISA adopted, respectively, Regulations on prospecting and exploration for polymetallic nodules in the Area (Nodules Regulations) and Regulations on prospecting and exploration for polymetallic sulphides (Sulphides Regulations) in the Area.[32] Both sets of Regulations elaborate on

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[27] LOSC, Article 157(1).

[28] LOSC, Article 145.

[29] Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 of 28 July 1994, in force 28 July 1996 (hereinafter 1994 Implementation Agreement); 1836 UNTS 42. The Agreement provides that its provisions and Part XI of the Convention shall be interpreted and applied together as a single instrument (Article 2(1)).

[30] Mining activities in the Area can only be carried out in accordance with a formal written plan of work drawn up in accordance with Annex III to the Convention (LOSC, Article 153(3)).

[31] 1994 Implementation Agreement, Annex, Section 1.7.

[32] Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (available at http://www.isa.org.jm/files/documents/EN/Regs/PN-en.pdf; last accessed 10 February 2012); Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area

the requirements for EIA. Regulation 18 of the Nodules Regulations provides, *inter alia,* that the following information has to be submitted in an application for the approval of a plan of work for exploration activities:

> (a) a general description and a schedule of the proposed exploration programme, including the programme of activities for the immediate five-year period, such as studies to be undertaken in respect of the environmental, technical, economic and other appropriate factors that must be taken into account in exploration;
> (b) a description of the programme for oceanographic and environmental baseline studies in accordance with these Regulations and any environmental rules, regulations and procedures established by the Authority that would enable an assessment of the potential environmental impact of the proposed exploration activities, taking into account any recommendations issued by the Legal and Technical Commission;
> (c) a preliminary assessment of the possible impact of the proposed exploration activities on the marine environment.

An almost identical provision is contained in Regulation 20(1) of the Sulphides Regulations. One difference in Regulation 20(1), which was adopted 10 years after Regulation 18, as compared to Regulation 18, is that its subparagraph (b) after the words "potential environmental impact" reads "including, but not restricted to, the impact on biodiversity". This explicit reference to biodiversity should not be taken to mean that this concern is not included in Regulation 18, which refers to potential environmental impact in general.

The obligations in respect of EIA and monitoring during the conduct of mining activities are set out in Regulation 31 of the Nodules Regulations and Regulation 33 of the Sulphides Regulations. The obligations in respect of EIA are defined in more detail in Regulation 33 than in Regulation 31. This in particular concerns Regulation 33(4), which reads:

> The [Legal and Technical Commission of the Authority] shall develop and implement procedures for determining, on the basis of the best available scientific and technical information, including information provided pursuant to regulation 20, whether proposed exploration activities in the Area would have serious harmful effects on vulnerable marine ecosystems, in particular hydrothermal vents, and ensure that, if it is determined that certain proposed exploration activities would have serious harmful effects on vulnerable marine ecosystems, those activities are managed to prevent such effects or not authorized to proceed.

(available at http://www.isa.org.jm/files/documents/EN/Regs/PolymetallicSulphides.pdf; last accessed 10 February 2012).

The Legal and Technical Commission of the ISA has adopted Recommendations for the Guidance of the Contractors for the Assessment of the Possible Environmental Impacts Arising from Exploration for Polymetallic Nodules in the Area.[33] These Recommendations, which were adopted pursuant to the Nodules Regulations, specify those activities which require an EIA and those activities which do not require such an assessment. For the former type of activities the Recommendations set out a detailed list of information a contractor is to provide.

EIA in the BBNJ Working Group and the General Assembly of the United Nations

The BBNJ Working Group, which was established pursuant to a United Nations General Assembly Resolution, has been discussing EIA in relation to activities in ABNJ at its sessions. At the session of the BBNJ Working Group in 2010, a number of States addressed various aspects of this matter.[34] This concerns the following points:

- the importance of EIAs and SEA in the implementation of ecosystem approaches to ocean management;[35]
- the importance of existing obligations to carry out EIAs, including Articles 205–206 of the LOSC and other instruments;[36]
- the need to take into account the cumulative impact of various activities and the potential of SEA to deal effectively with the assessment of such cumulative impacts;[37]
- the significance of the work on scientific and technical aspects relevant to EIAs in ABNJ in the context of the CBD;[38]
- the need for a global methodology for carrying out EIAs at the regional level, taking into consideration sectoral activities;[39] and

[33] The Recommendations are contained in the document ISBA/7/LTC/1/Rev.1** of 13 February 2002.
[34] The debate on this issue is summarized in the Letter dated 16 March 2010 from the Co-Chairpersons of the *Ad Hoc* Open-ended Informal Working Group to the President of the General Assembly (contained in the document A/65/68 of 17 March 2010), paras. 51–57. For another summary of the debate see *Briefing Note on UNGA WG on Marine Biodiversity* (International Institute for Sustainable Development; available at http://www.iisd.ca/oceans/marinebiodiv3/) 4.
[35] Letter dated 16 March 2010 from the Co-Chairpersons, *supra* note 34 at para. 51.
[36] *Ibid.*, para. 52.
[37] *Ibid.*, para. 53.
[38] *Ibid.*, para. 54.
[39] *Ibid.*, para. 55.

- A number of delegations proposed applying the approach contained in Resolution 61/105 on the assessment of bottom fishing activities to all activities in ABNJ as appropriate. This could be accomplished by a Resolution of the General Assembly.[40]

The Co-Chairpersons of the 2010 session of the BBNJ Working Group included the following recommendations on EIA in their letter to the President of the General Assembly:

> 14. The General Assembly should recognize the importance of environmental impact assessments, in particular for the implementation of ecosystem and precautionary approaches.
>
> 15. It should request the Secretary-General to include, in the annual report on oceans and the law of the sea, information on environmental impact assessments undertaken with respect to planned activities in areas beyond national jurisdiction, including capacity-building needs, on the basis of information requested from States and competent international organizations.
>
> 16. It should recognize the importance of further developing scientific and technical guidance on the implementation of environmental impact assessments with respect to planned activities in areas beyond national jurisdiction, including consideration of the assessment of cumulative impacts.[41]

Prior to the 2010 BBNJ Working Group, the General Assembly in its 2009 Resolution on Oceans and the Law of the Sea had encouraged States to consider the further development of EIA processes covering activities under their jurisdiction or control in cases in which these activities may cause substantial pollution of, or significant and harmful changes to, the marine environment.[42] The 2010 General Assembly Resolution on Oceans and the Law of the Sea has taken into account the recommendations of the Co-Chairpersons of the 2010 session of the BBNJ Working Group. The Resolution endorsed the suggestion that the Secretary-General should include information on EIAs in the Annual Report on Oceans and the Law of the Sea.[43] The Resolution only pays limited attention to the suggestion that scientific and technical guidance on the implementation of EIAs should be further developed and that the assessment of cumulative impacts should be considered. The Resolution notes the

[40] *Ibid.*, para. 56.
[41] *Ibid.*
[42] Oceans and the Law of the Sea; Resolution adopted by the General Assembly on 4 December 2009 (A/RES/64/71 of 12 March 2010) para. 116.
[43] Oceans and the Law of the Sea; Resolution adopted by the General Assembly on 7 December 2010 (A/RES/65/37 of 17 March 2011) para. 167.

work in the framework of the CBD on this point, but does not explicitly provide a view on the need of further work on these matters.[44]

The 2011 BBNJ Working Group to a large extent focused on how progress might be achieved in respect of the development of the regime for ABNJ.[45] In respect of EIA, different suggestions were made. On the one hand, it was suggested that the elaboration of a global regime was needed. On the other hand, emphasis was put on focusing on (existing) regional regimes. The discussions at the meeting also pointed out that a need exists for further information in respect of the specifics of EIA in ABNJ.

The Convention on Biological Diversity

Article 14 of the CBD requires Contracting Parties, as far as possible and as appropriate, to introduce appropriate procedures for EIA of proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects. This requirement also applies to projects in ABNJ.[46]

SEA and EIA in ABNJ have been considered in the framework of the Conference of the Parties (COP) of the CBD. COP-9 in its Decision IX/20 envisaged the convening of an expert Workshop on Scientific and Technical Aspects Relevant to EIA in ABNJ. This Workshop, which was convened in Manila in November 2009, considered the CBD Voluntary Guidelines on Biodiversity-inclusive EIA and the CBD Draft Guidance on Biodiversity-inclusive SEA to establish to what extent these documents could also be used for SEA and EIA in ABNJ. It should be noted that, taking into account the scope of application of the CBD, the existing Guidelines and Guidance actually are already relevant as regards processes and activities in ABNJ.[47]

The Report of the Manila Workshop contains an analysis of the Guidelines and Guidance, setting out the difficulties which may be encountered if they are applied to ABNJ.[48] Annexes II and IV to the Report set out conclusions on, respectively, EIAs and SEAs in ABNJ and Annex III sets out conclusions

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[44] *Ibid*., para. 175.

[45] The information on the 2011 BBNJ Working Group included in this report is based on the Summary of the Fourth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 31 May–3 June 2011 (*Earth Negotiations Bulletin* Vol. 25, No. 70, Monday 6 June 2011).

[46] The provisions of the CBD apply to "processes and activities, regardless of where their effects occur, carried out under [a Party's] jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction" (CBD, Article 4(b)).

[47] CBD, Articles 4(b) and 14.

[48] Report of the Expert Workshop on Scientific and Technical Aspects Relevant to

on the applicability of the CBD Voluntary Guidelines on Biodiversity-inclusive Environmental Impact Assessment to these areas. Annex II lists a number of differences between areas within national jurisdiction and ABNJ, which complicate the application to the latter of rules and procedures developed in respect of EIAs in the former.

The outcome of the Manila Workshop was taken into account at COP-10 of the CBD in Nagoya in October 2010. Decision X/29 encourages Parties to put further emphasis on the contribution of EIAs and SEAs to further strengthen sustainable use of living and non-living resources in areas within and beyond national jurisdiction.[49] The Decision also adopted arrangements which should allow COP-11 to consider draft voluntary guidelines for the consideration of biodiversity in EIAs and SEAs. In that connection Annexes II, III and IV to the Manila Workshop's Report should provide guidance. It was recognized that that such "guidelines would be most useful for activities that are currently unregulated with no process of assessing impacts".[50]

The 1992 Rio Declaration and the 2002 Joint Plan of Implementation

The 1992 Rio Declaration[51] and the 2002 Joint Plan of Implementation[52] provide two examples of a commitment adopted at high-level global conferences to apply EIA. Principle 17 of the Rio Declaration provides:

> Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

The Joint Plan of Implementation calls for promoting the use of EIAs for projects or activities that are potentially harmful to coastal and marine environments and their resources.[53]

The Rio Declaration and the Joint Plan of Implementation do not indicate the minimum standards that should be applied in carrying out EIAs.

Environmental Impact Assessment in Marine Areas Beyond National Jurisdiction (UNEP/CBD/EW-EIAMA/2 of 20 November 2009); (hereinafter Manila Workshop).

[49] Decision X/29 Marine and Coastal Biodiversity, para. 13(h).

[50] *Ibid*., para. 50.

[51] Rio Declaration on Environment and Development adopted at the United Nations Conference on Environment and Development (Rio de Janeiro, 3–14 June 1992).

[52] Plan of Implementation of the World Summit on Sustainable Development adopted at the World Summit on Sustainable Development (Johannesburg, 26 August–4 September 2002).

[53] Joint Plan of Implementation, para. 36(c).

UNEP Goals and Principles of Environmental Impact Assessment

The UNEP Goals and Principles, which were adopted in 1987, contain a number of principles applicable to EIA. The Goals and Principles are contained in a legally non-binding instrument. They nonetheless can be considered to provide an authoritative elaboration of the general obligation to carry out EIAs.[54]

Principle 1 sets out when EIAs should be conducted. In this connection, it is observed that "[w]here the extent, nature or location of a proposed activity is such that it is likely to significantly affect the environment, a comprehensive environmental impact assessment should be undertaken in accordance with the following principles."

Principle 4 lists the elements which an EIA at a minimum should include:

(a) A description of the proposed activity;
(b) A description of the potentially affected environment, including specific information necessary for identifying and assessing the environmental effects of the proposed activity;
(c) A description of practical alternatives, as appropriate;
(d) An assessment of the likely or potential environmental impacts of the proposed activity and alternatives; including the direct, indirect, cumulative, short-term and long-term effects;
(e) An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;
(f) An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;
(g) An indication of whether the environment of any other State or areas beyond national jurisdiction is likely to be affected by the proposed activity or alternatives.
(h) A brief, non-technical summary of the information provided under the above headings.

Other elements contained in the Goals and Principles are, *inter alia*, concerned with the relationship between the detail of the assessment and the likely impacts of a project on the environment, the nature of the examination of the assessment, public participation, monitoring, and cooperation between States in transboundary contexts.

[54] See also *Pulp Mills* case, judgment of 20 April 2010, para. 205.

The Espoo Convention and the Kiev Protocol

The 1991 Convention on the Environmental Impact Assessment in a Transboundary Context (Espoo Convention) obliges States Parties to conduct an EIA as described in Appendix II to this Convention with respect to every proposed activity that is likely to cause significant adverse transboundary impact.[55] The 2003 Protocol on Strategic Environmental Assessment to the Convention on the Environmental Impact Assessment in a Transboundary Context (Kiev Protocol) provides that a SEA has to be carried out in the case of plans and programs defined in Article 4(2), (3) and (4) of the Protocol, which are likely to have significant environmental, including health, effects.[56]

The Espoo Convention and the Kiev Protocol provide examples of legally binding instruments setting out detailed rules for EIA and SEA. The Espoo Convention and the Protocol are regional instruments negotiated in the framework of the United Nations Economic Commission for Europe (UN-ECE). However, States having consultative status with the UN-ECE may also become a party to them.[57] At present the Espoo Convention only has Member States of the UN-ECE as Parties. The geographical scope of application of these instruments is limited to areas within national jurisdiction.[58]

Specific Activities in ABNJ and EIA

Introduction

The following subsections deal with a number of specific activities which are currently carried out in ABNJ or may be carried out in these areas in the future. This is not an exhaustive discussion of such activities. The current overview is considered to be sufficient to identify the main issues and questions

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[55] Convention on the Environmental Impact Assessment in a Transboundary Context, Article 2(2); adopted on 25 February 1991, entry into force 10 September 1997, 1989 UNTS 310.

[56] Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, Article 4(1); (hereinafter Kiev Protocol); adopted on 21 May 2003, entry into force 11 July 2010, Doc. ECE/MP.EIA/2003/2. The Kiev Protocol is in large part based on the SEA Directive of the European Union (EU), which was adopted in 2001 and required transposition by the Member States of the EU in July 2004 (see G. Stoeglehner and G. Wegerer, "The SEA-Directive and the SEA-Protocol adopted to Spatial Planning—Similarities and Differences" (2006) 26 *Environmental Impact Assessment Review* 586–599.

[57] Espoo Convention, Articles 16 and 17; Kiev Protocol, Articles 21 and 23.

[58] Espoo Convention, Articles 1(viii) and 2(1); Kiev Protocol, Articles 2(3) and 2(4).

which result from the regulation of specific activities in relation to developing a global legally binding instrument on EIA in ABNJ.

Fisheries

As was observed previously, the LOSC does not contain provisions on EIA specifically dealing with fisheries. This also is the case for the Fish Stocks Agreement.[59] The option of applying EIAs in the context of fisheries was suggested by a number of delegations during the resumed Review Conference on the Fish Stocks Agreement in 2010.[60] The outcomes of the resumed Review Conference, which were adopted by the Conference, do not contain a reference to EIA, but only refer to the need to give effect to Article 5(d) of the Fish Stocks Agreement, which refers to the assessment of the impacts of fishing in broader terms, and does not envisage EIAs prior to the opening of a new fishery.[61, 62]

The assessment of the impact of certain fishing activities in ABNJ was addressed by the General Assembly in its Resolution on Fisheries of 2006.[63]

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[59] United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 (hereinafter Fish Stocks Agreement).

[60] See Report of the resumed Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; Prepared by the President of the Conference (A/CONF.210/2010/7 of 27 July 2010), paras. 31, 58 and 135.

[61] Article 5 of the Fish Stocks Agreement provides:

> In order to conserve and manage straddling fish stocks and highly migratory fish stocks, coastal States and States fishing on the high seas shall, in giving effect to their duty to cooperate in accordance with the Convention:
> [. . .]
> (d) assess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks[.]

According to the *Earth Negotiations Bulletin*, Iceland rejected the suggestion by Greenpeace that Article 5(d) implied an obligation to carry out prior assessments for all fisheries (7(65) *Earth Negotiations Bulletin* 7).

[62] An example of a definition of a new fishery is provided by the Commission for the Conservation of Antarctic Marine Living Resources. CCAMLR Conservation Measure 21-01 (2009) defines a new fishery as a fishery for which information on the distribution, abundance, demography, potential yield and stock identity from comprehensive research/surveys or exploratory fishing has not been submitted to the Commission; catch and effort data have never been submitted to the Commission; or catch and effort data from the two most recent seasons in which fishing occurred have not been submitted.

[63] Sustainable Fisheries, including through the 1995 Agreement for the Implementation of

Resolution 61/105 requested regional fisheries management organizations (RFMOs)[64] and, as appropriate, flag States to take a number of measures to protect vulnerable marine ecosystems (VMEs) from the adverse impacts of bottom fisheries (i.e., fisheries using gear which has an impact on benthic ecosystems) no later than December 2008. This, *inter alia*, included an assessment as to whether individual bottom fishing activities would have significant adverse impacts on VMEs. Other measures concerned the identification of VMEs, the closure of such areas unless adequate conservation and management measures were in place, ensuring that vessels encountering such areas would cease fishing, and reporting such encounters to ensure that adequate measures could be taken.

More detailed rules for impact assessments in the framework of bottom fisheries on the high seas have been elaborated by the Food and Agriculture Organization (FAO), through the adoption of the FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas on 29 August 2009.[65] The Guidelines, like the General Assembly Resolution, specify that flag States and RFMOs should conduct assessments to establish if deep-sea fishing activities are likely to produce significant adverse impacts in a given area, and specify which matters the impact assessment should address.[66] The Guidelines also provide an elaboration of the terms 'vulnerable marine ecosystems' and 'significant adverse impacts'.[67]

The General Assembly reviewed the implementation of Resolution 61/105 in 2009.[68] The 2009 Resolution on Fisheries of the General Assembly refers

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the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments; Resolution adopted by the General Assembly on 8 December 2006 (A/RES/61/105 of 6 March 2007) paras. 80–91.

[64] References to regional fisheries management organizations (RFMOs) should be read as including regional fisheries management arrangements.

[65] Available at ftp://ftp.fao.org/docrep/fao/011/i0816t/i0816t.pdf (last accessed 25 February 2012).

[66] International Guidelines for the Management of Deep Sea Fisheries in the High Seas, para. 47.

[67] *Ibid*., paras. 17–19 and 42.

[68] For a review of the implementation of Resolution 61/105 see also M Gianni, *Review of the Implementation of the Provisions of UN GA Resolution 61/105 Related to the Management of High Seas Bottom Fisheries. Submission to the UN Division for Oceans Affairs and the Law of the Sea* (May 2009) (available at http://www.ourfutureplanet.org/newsletters/resources/Ecosystems/DSCC%20Review%20of%20the%20implementation%20of%20the%20provisions%20of%20UN%20GA%20resolution%2061–105.pdf; last accessed 25 February 2012); AD Rogers and M Gianni, *The Implementation of UNGA Resolutions 61/105 and 64/72 in the Management of Deep-Sea Fisheries on the High Seas* (May 2010) (available at http://www

to actions to address the impact of bottom fisheries on vulnerable ecosystems.[69] States and regional fisheries management organizations are, *inter alia*, urged to ensure that their actions in implementing the 2006 and 2009 General Assembly Resolutions are consistent with the FAO Guidelines. The General Assembly resolutions and the Guidelines have been taken into account by RFMOs in adopting measures in respect of bottom fisheries in their regulatory areas.

There are no global rules in respect of EIA for other newly developing fisheries. This seems to be mostly explained by the fact that international fisheries law has developed in parallel with environmental law. Whereas the instrument of EIA has been developed in the context of environmental law, fisheries law has not taken this broad perspective in assessing the impacts of fishing activities. Fisheries management focuses on the assessment of the impact of activities on an ongoing basis and does not require the prior assessment of impacts. Moreover, in this case the focus rather has been on the impact of fishing activities on populations of harvested species and species associated with or dependent upon harvested species instead of impacts on the marine environment as such. This approach is contained in Article 119 of LOSC, which sets out the rules applicable to the establishment of conservation measures for the living resources of the high seas.[70]

The Fish Stocks Agreement, which elaborates on the Convention, takes the same general approach as the Convention, but has taken broader environmental concerns on board to a much larger extent.[71] For instance, States fishing for straddling and highly migratory stocks on the high seas are required to protect biodiversity in the marine environment.[72] The Fish Stocks Agreement also requires the application of the precautionary approach. In that connection, States are, *inter alia*, required to:

.savethehighseas.org/publicdocs/61105-Implemention-finalreport.pdf; last accessed 25 February 2012).

[69] Sustainable Fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments; Resolution adopted by the General Assembly on 4 December 2009 (A/RES/64/72 of 19 March 2010), paras. 112–130.

[70] See also LOSC, Article 61.

[71] A full discussion in this respect is beyond the scope of the present report. Apart from the provisions mentioned in the text, other provisions of Article 5 and Article 6(6) can be mentioned in this context.

[72] Fish Stocks Agreement, Article 5(g).

> develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern.[73]

The uncertainty surrounding the impact of new or exploratory fisheries has led to the adoption of specific conservation and management measures by RFMOs. An example is provided by the Commission for the Conservation of Antarctic Marine Living Resources. Two of the Commission's conservation measures, 21-01(2009) and 21-02 (2009) deal, respectively, with new and exploratory fisheries. To a certain extent these measures can be said to introduce requirements similar to prior EIA. The measures require States proposing new or exploratory fisheries to submit information on, *inter alia*, biological information on the target species and details of dependent and related species and the likelihood that they will be affected by the proposed new or exploratory fishery.[74] Both measures furthermore specify that if the proposed fishery "will be undertaken using bottom trawl gear, information on the known and anticipated impacts of this gear on vulnerable marine ecosystems, including benthos and benthic communities" is to be submitted by the State proposing to participate in the fishery concerned.[75] This latter provision gives effect to the General Assembly Resolutions on bottom fisheries discussed above. The Commission is to take the information submitted by States into account in deciding on the actions it deems necessary for specific fisheries.[76]

Another example is provided by the North East Atlantic Fisheries Commission (NEAFC). The NEAFC makes a distinction between "existing bottom fishing areas" and "new bottom fishing areas". Fishing activities in the latter are only authorized under the strict conditions of the Exploratory Bottom Fisheries Protocol.[77]

The recent Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean may require a broader

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[73] *Ibid.*, Article 6(3)(d).

[74] Conservation measure 21-01(2009) Notification that Members are considering initiating a new fishery, para. 3(ii); Conservation measure 21-02 (2009) Exploratory fisheries, para. 5(ii).

[75] Conservation measure 21-01(2009) Notification that Members are considering initiating a new fishery, para. 3(ii)(e); Conservation measure 21-02 (2009) Exploratory fisheries, para. 5(ii)(e).

[76] Conservation measure 21-01(2009) Notification that Members are considering initiating a new fishery, para. 11; Conservation measure 21-02 (2009) Exploratory fisheries, para. 6.

[77] See Oral Statement by the NEAFC Secretariat to the Third Meeting of the *Ad-Hoc* Open-ended Informal Working Group to Study Issues Relating to the Conservation and Sustainable Use of Marine Biological Diversity Beyond Areas of National Jurisdiction; Kjartan Hoydal, February 2010, pp. 1–2.

application of prior assessments. Article 22 of this Convention addresses the regulation of new or exploratory fisheries. Such fisheries shall only be opened by the Commission to be constituted under this Convention when it has adopted cautious preliminary conservation and management measures in respect of that fishery, and, as appropriate, non-target and associated or dependent species, and appropriate measures to protect the marine ecosystem in which that fishery occurs from adverse impacts of fishing activities. Such preliminary measures may include requirements regarding mitigation measures to prevent adverse impacts on marine ecosystems. This approach implies the need to carry out prior assessments to establish the potential adverse impacts on the marine environment.

The OSPAR Commission in its 2010 Quality Status Report on the OSPAR Maritime Area recognized that the use of "environmental impact assessments approaches to identify and mitigate possible impacts arising from the expansion of fishing into new areas" is one of the key issues on which OSPAR needs to support the work of fisheries management bodies.[78] Information provided by NEAFC, one of the fisheries bodies concerned, confirms that the existing information on the impact of fisheries in ABNJ is limited. A section of the NEAFC Fisheries Status Report 1998–2007 concludes that:

> There is no scientific specific advice on the environmental impacts of fisheries in the high seas (NEAFC Regulatory Area) or the North East Atlantic Ocean.
>
> In a response to OSPAR, ICES informs that the effects of fishing in OSPAR Region V (North East Atlantic Ocean) are relatively poorly studied. A number of the deep-water biogenic habitats in the Area are very susceptible to damage from seabed fisheries, particularly trawling, but also to the intense or prolonged use of other gears. Damage has been documented at a number of locations, but there is very likely to have been more damage than that documented.
>
> Fisheries managers have introduced closed areas to protect some of these habitats. Bycatch of birds, marine mammals, and sharks occurs, and in the case of sharks this is probably affecting stocks in an unsustainable manner.
>
> Further scientific surveys are required to identify habitats of particular importance, along with fisheries closures to protect vulnerable marine ecosystems. Bycatch can be reduced using technical measures, but these require dedicated development, usually best undertaken in association with relevant fishers.
>
> *It is therefore not possible to assess the effects of NEAFC measures, area management, measures reducing allowable effort and banning certain gears.*[79]

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[78] OSPAR Commission, *Quality Status Report 2010*, 86.

[79] NEAFC Fisheries Status Report 1998–2007, section 7.12.3 (Emphasis provided, footnote omitted). A reference to the Status Report is included in a section on "The NEAFC Fisheries and their Impact" in the document Information on the Protection of Biodiversity and Mitigating Impact of Fisheries in the North East Atlantic; a report prepared by the NEAFC Secretariat for CBD COP 10 Agenda item 5.2 and 5.4 Nagoya, October 2010.

Dumping

At the global level, dumping is regulated under the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) and its 1996 Protocol. The London Convention and the Protocol apply to all marine waters except for internal waters. The 1996 Protocol, which entered into force in 2006, in principle prohibits the dumping of all wastes and other matter, except those which are listed in Annex I to the Protocol. In respect of the dumping of these latter materials, Annex II to the Protocol is applicable. This Annex sets out detailed rules to assess the impact of the proposed dumping of materials on the marine environment. In this connection, the physical and biological properties of the waste must be described in detail. The information which must be collected in connection with the selection of a dump site and the assessment of potential impacts must be submitted. Annex II also requires assessing alternatives to dumping materials into the marine environment, such as re-use, off-site recycling and destruction of hazardous constituents. On the basis of the information provided under Annex II, a State must decide whether a proposed dumping of materials in the marine environment can be carried out. The Protocol requires all planned dumping activities in the marine environment to be preceded by a prior EIA.

Ocean Fertilization[80]

The possible adverse impacts of ocean fertilization on the marine environment have been a concern of the international community for some time.[81] A number of projects involving ocean fertilization have been carried out in ABNJ.

[80] As appears from the discussion in this section, ocean fertilization has been defined as dumping under the London Convention and its 1996 Protocol. Dumping is discussed in the preceding subsection. The reason for discussing ocean fertilization separately is that it could also have been considered to be an issue not covered by the definition of dumping contained in these instruments. The categorization of ocean fertilization as dumping and its regulation by the Contracting Parties to the London Convention and its 1996 Protocol provides an interesting example of the flexibility of international law in dealing with newly arising issues. For an argument that ocean fertilization as a climate change tool falls under the definition of dumping contained in the LOSC and the London Convention and its 1996 Protocol see R Rayfuse, MG Lawrence and KM Gjerde, 'Ocean Fertilization and Climate Change: The Need to Regulate Emerging High Seas Uses' (2008) 23 *International Journal of Marine and Coastal Law* 297–326 at 309 and following.

[81] There are different definitions of ocean fertilization. The present report employs the definition of ocean fertilization contained in Resolution LC-LP.1 (2008) on the Regulation of Ocean Fertilization (adopted on 31 October 2008) (LC 30/16 of 9 December 2008, Annex 6, para. 2), namely "any activity undertaken by humans with the principal intention of stimulating primary productivity in the oceans".

Detailed rules for ocean fertilization activities have been primarily elaborated in the framework of the London Convention and its Protocol. The 30th meeting of the Contracting Parties to the London Convention and the 3rd meeting of the Contracting Parties to the 1996 Protocol in October 2008 agreed that ocean fertilization activities were included in the scope of the London Convention and the Protocol.[82] The Resolution on this matter adopted by these meetings only allows ocean fertilization in the framework of legitimate scientific research. Other ocean fertilization activities are considered to be dumping and are not allowed under the Convention and the Protocol. This approach is justified by the consideration that "knowledge on the effectiveness and potential environmental impacts of ocean fertilization is currently insufficient to justify activities other than legitimate scientific research". The meetings further agreed that "scientific research proposals should be assessed on a case-by-case basis using an assessment framework to be developed by the Scientific Groups under the London Convention and Protocol". Until this specific assessment framework is available, "Contracting Parties should be urged to use utmost caution and the best available guidance to evaluate the scientific research proposals to ensure protection of the marine environment".[83]

The Scientific Groups of the London Convention and the 1996 Protocol during an extraordinary session in October 2010 adopted a draft "Assessment Framework for Scientific Research Involving Ocean Fertilization".[84] The Assessment Framework sets out a detailed scheme for assessing proposed ocean fertilization activities, including an initial assessment, an environmental assessment, decision-making on the execution of a project on the basis of these assessments and monitoring. The Assessment Framework was adopted at the 32nd Consultative Meeting of the London Convention and the 5th Meeting of Contracting Parties to the 1996 Protocol in October 2010.[85]

Geo-engineering

Geo-engineering concerns projects aiming to deliberately influence the Earth's climate in order to counterbalance the effects of global warming. The possible

[82] Resolution LC-LP.1 (2008) on the Regulation of Ocean Fertilization (adopted on 31 October 2008) (LC 30/16 of 9 December 2008, Annex 6).

[83] *Ibid*. (footnote suppressed).

[84] Contained in Annex 1 to the Report of the Extraordinary Session of the Scientific Groups (LC 32/WP.1 of 11 October 2010).

[85] Resolution LC-LP.2(2010) on the Assessment Framework for Scientific Research Involving Ocean Fertilization (adopted on 14 October 2010) (reproduced in Report of the Thirty-Second Consultative Meeting and the Fifth Meeting of Contracting Parties (LC32/15 of 9 November 2010, Annex 5).

impacts of geo-engineering on biodiversity were considered by COP-10 of the CBD. Decision X/33 Biodiversity and Climate Change provides Parties to the Convention and other Governments with guidance while dealing with geo-engineering activities which may have an impact on biodiversity.[86] States are invited to ensure that:

> in the absence of science based, global, transparent and effective control and regulatory mechanisms for geo-engineering, and in accordance with the precautionary approach and Article 14 of the Convention, that no climate-related geo-engineering activities that may affect biodiversity take place, until there is an adequate scientific basis on which to justify such activities and appropriate consideration of the associated risks for the environment and biodiversity and associated social, economic and cultural impacts, with the exception of small scale scientific research studies that would be conducted in a controlled setting in accordance with Article 3 of the Convention, and *only if they are justified by the need to gather specific scientific data and are subject to a thorough prior assessment of the potential impacts on the environment*.[87]

The Decision also requests the Executive Secretary of the CBD:

> Taking into account the possible need for science based global, transparent and effective control and regulatory mechanisms, subject to the availability of financial resources, undertake a study on gaps in such existing mechanisms for climate-related geo-engineering relevant to the Convention on Biological Diversity, bearing in mind that such mechanisms may not be best placed under the Convention on Biological Diversity, for consideration by the Subsidiary Body on Scientific Technical and Technological Advice prior to a future meeting

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[86] The Decision defines such activities as "any technologies that deliberately reduce solar insolation or increase carbon sequestration from the atmosphere on a large scale that may affect biodiversity (excluding carbon capture and storage from fossil fuels when it captures carbon dioxide before it is released into the atmosphere)" (Decision X/33 Biodiversity and Climate Change, footnote 76). The Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification Techniques of 10 December 1976 prohibits States Parties to engage in military or any other hostile use of environmental modification techniques having widespread, longlasting or severe effects as the means of destruction, damage or injury to any other State Party (Article I). Article II of this Convention provides that:

> the term "environmental modification techniques" refers to any technique for changing—through the deliberate manipulation of natural processes—the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space.

[87] Decision X/33 Biodiversity and Climate Change, para. 8(w); (footnote omitted; emphasis provided).

of the Conference of the Parties and to communicate the results to relevant organizations.[88]

Evaluation and Points for Discussion

The judgment by the International Court of Justice in the *Pulp Mills* case indicates that a customary international law obligation for States to undertake an EIA exists where there is a risk that a proposed activity may have a significant adverse impact in a transboundary context. The reasoning of the Court indicates that this obligation also exists in respect of proposed activities in ABNJ. This obligation exists for all States, irrespective of whether or not they are parties to legally binding instruments which contain provisions on EIA.

The Court in its judgment also indicated that customary international law does not specify the scope and content that an EIA should have as a minimum. However, the Court did indicate minimum requirements of an EIA in order for a State to meet its obligations in this respect. Factors which according to the Court must be taken into account are the nature and magnitude of the proposed activity and its likely adverse impact on the environment, as well as the need to exercise due diligence in conducting an EIA. An EIA must be conducted prior to the implementation of a project. Once operations have started and, where necessary, throughout the life of a project, continuous monitoring of its effects on the environment must be undertaken.

Although the judgment of the Court provides important indications as to the minimum conditions of EIA, it leaves a large margin of discretion to individual States. There is no guarantee that the implementation of this obligation by individual States will lead to a coherent and effective EIA regime for ABNJ.

The LOSC includes a general obligation to carry out assessments prior to the commencement of planned activities. This obligation is applicable to ABNJ. Article 206 refers to activities under the jurisdiction and control of the State concerned. Activities taking place under the jurisdiction or control of a State in ABNJ are covered by this provision. The Convention provides some guidance on the circumstances under which such assessments must be carried out. Where States have reasonable grounds for believing that a planned activity may either cause substantial pollution or significant and harmful changes to the environment, the potential effects of such activities on the marine environment must be assessed. Article 206 does not specify the steps a State is

[88] *Ibid.*, para. 9(m).

required to take once it has at its disposal the outcome(s) of an assessment. However, in the light of the obligations of States to prevent, reduce and control pollution of the marine environment contained in, *inter alia*, Article 194 of the Convention, such requirements do exist under the Convention. Article 206 must be implemented in accordance with the customary law obligation to carry out EIAs in ABNJ.

In view of the outcome of an assessment, a State will be required to take all measures to ensure that it meets its obligations under the Convention in respect of the protection and preservation of the environment. This implies an obligation to take due account of the outcome of an EIA. Although not specifically mentioned in the Convention, States are required to take a precautionary approach in deciding on the follow-up they are to give on the outcome of an EIA.

As was noted above, the International Court of Justice in the *Pulp Mills* case indicated that a State under whose jurisdiction and control an activity takes place has an obligation to monitor the effects of such activities after they have started. Such an obligation to monitor these effects is also contained in Article 204 of the Convention.

The standards in respect of EIAs have been elaborated in a number of international instruments, such as the UNEP Goals and Principles of Environmental Impact Assessment and the Espoo Convention. These instruments may offer guidance in elaborating rules for a global binding instrument on EIA in ABNJ. However, procedures for EIA have mainly been developed for areas within national jurisdiction. Due to a number of considerations, it may be required to significantly change these procedures to make them suitable for EIAs in ABNJ.[89]

A number of activities in ABNJ at present are already subject to more specific obligations in respect of EIA. Rules for EIA for mining activities in the Area have been developed by the ISA. These Regulations at present only apply to prospecting and exploration, but are intended to be extended to exploitation activities before that stage of the mining of mineral resources in the Area occurs. A further example of an elaborate regime for prior EIA is provided for the dumping of wastes and other matter by the London Convention and its 1996 Protocol.

In the fisheries context, a system of EIA has been set up for bottom fisheries which may have a significant adverse impact on VMEs. EIAs are not applied generally in the development of new fisheries. The development of new fisheries in the context of RFMOs does take into account the impact on the stocks

[89] See Manila Workshop Report, *supra* note 48, Annexes II–IV.

concerned and associated and dependent species. That approach is in accordance with the general obligations of States contained in the LOSC and the Fish Stocks Agreement.

The analysis in respect of fisheries suggests a number of conclusions on the relevance of EIAs for that sector. The existing practice in RFMOs suggests that States do not consider that there is a general obligation to carry out EIA *prior to* the start of new fisheries. Rather the development of new fisheries has to be carried out in accordance with the methodology included in the LOSC and the Fish Stocks Agreement as elaborated in the framework of RFMOs. This specific approach to the development of new fisheries suggests that a proposal to require a prior EIA for *all* fisheries may not be acceptable to States with significant fisheries interests.

The recent General Assembly Resolutions on bottom fisheries and the FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas require prior EIA in respect of specific fisheries. Conservation Measures 21-01(2009) and 21-02 (2009) of the Commission for the Conservation of Antarctic Marine Living Resources, which deal, respectively, with new and exploratory fisheries, also provide an example of the introduction of certain prior assessment requirements. This practice could provide the basis for a more general application of EIAs to new fisheries which have similar characteristics and impacts as the fisheries covered by the Resolutions and the Guidelines. There is some recognition in recent practice that EIAs should be more widely applied in a fisheries context.

The General Assembly Resolutions on EIAs in respect of bottom fisheries provide an example of the potential of the Assembly to address new developments which are not regulated by other international fora. At the same time, it should be acknowledged that this is an *ad-hoc* and reactive approach, which may lead to significant delays in implementing an effective regime of EIA.

The discussion in the section on EIA in the context of specific instruments contains two further examples - apart from bottom fisheries - of newly emerging or envisaged activities for which the international community has considered the need for EIA. This concerns the regulation of ocean fertilization in the framework of the London Convention and its 1996 Protocol and the issue of geo-engineering in the framework of the CBD. These two cases suggest a number of conclusions which are relevant to EIA in ABNJ in general. In the case of ocean fertilization it was possible to agree on a detailed regulatory framework including EIA. This approach was possible in this case because the parties to the London Convention and the 1996 Protocol could agree on the classification of ocean fertilization as dumping under these instruments. Other activities may also be brought under the framework of the London

Convention and its 1996 Protocol, but this may not be possible for all new activities.

The CBD has not addressed the issue of geo-engineering in the same measure of detail. The focus at the moment is on further studies and it is recognized that the CBD may not be the most appropriate forum to agree on further regulation, should this be considered to be necessary. These two cases, like the General Assembly Resolutions on bottom fisheries, are based on the adoption of measures elaborating on the general obligation to carry out EIAs to address a specific new issue. Such a reactive approach may not always be the most appropriate way to deal with a newly emerging activity. It may lead to significant adverse impacts before an effective regulatory framework has been developed and is being effectively implemented.

The preceding analysis points out that detailed regulations on EIA exist in respect of a number of activities in ABNJ. This requires considering how these existing frameworks should be taken into account if it were to be decided to develop a global instrument on EIA for all activities in ABNJ as is suggested by research question 4 of the current research project.[90] Accommodating these existing frameworks may be a complicating factor in negotiating a global instrument on EIA.[91]

It has been observed that SEAs have a number of distinct advantages for planning and the management of ABNJ.[92] SEAs will be more appropriate to identify the cumulative effects of different activities in specific areas.[93] The above suggests that an instrument on EIA should also provide for SEAs. In the case of SEAs in ABNJ it may be difficult to agree on the agencies which will be responsible for carrying them out and taking follow-up decisions. Different activities are being regulated by different international institutions and there will be a need for coordination and cooperation.

The development of a general regime of EIA for ABNJ has been mostly considered in the framework of the BBNJ Working Group established by the General Assembly and the Manila Expert Workshop under the auspices of the CBD. The BBNJ Working Group has taken into account legal aspects of this

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[90] See also Co-chairs Summary Report, December 2007, Workshop on High Seas Governance for the 21st Century, New York, October 17–19, 2007 (IUCN, 2008), 15.

[91] See also Manila Workshop Report, *supra* note 48 at 15.

[92] *Ibid.*, at 44; see also *ibid.*, at 17, para. 62.

[93] See also K Bastmeijer and T Koivurova, *Theory and Practice of Transboundary Environmental Impact Assessment* (Martinus Nijhoff Publishers, Leiden, 2008), 386; D Currie and K Wowk, 'Climate Change and CO_2 in the Oceans and Global Oceans Governance' (2009) *Carbon and Climate Law Review* 387–404 at 401.

matter and its Co-Chairpersons have suggested a number of practical steps which might be taken to advance the development of the general regime of EIA for ABNJ. The Manila Expert Workshop has focused on scientific and technical aspects of this issue. Decision X/29 of the COP of the CBD indicates that the development of guidance on SEA and EIA in ABNJ will continue in the framework of the CBD. The 2010 General Assembly Resolution on Oceans and the Law of the Sea may also contribute to moving the debate on this topic forward. The Resolution requests the Secretary-General to include information on EIAs in ABNJ in the Annual Report on Oceans and the Law of the Sea. Such information could be helpful to identify gaps in the implementation of the obligations of States in respect of EIA.

At present, there are no specific commitments by the international community to work towards the adoption of a global legally binding instrument for EIA for ABNJ. The current stage of the debate suggests that it would be premature to make suggestions in respect of the specific content of such an instrument. Moreover, it might be premature to suggest that an effective regime for EIA for ABNJ necessarily needs to include a global legally binding instrument containing detailed rules applicable to all ocean uses. A possible approach would be to suggest guidelines which might inform the further debate on this matter. This could help to focus the debate and bring it forward. On the basis of the preceding analysis, it is suggested that the following issues could be taken into account in drafting a list of guidelines:

a. the content of the obligation of EIA as contained in general international law and the LOSC as set out above;
b. at what level of detail should these guidelines address the content of a more detailed regime for EIA in ABNJ?;
c. should they refer to the linkage between EIA and the precautionary and ecosystem approaches?;
d. should these guidelines suggest steps States are required to take following an EIA in respect of planned activities under their jurisdiction and control?;
e. should these guidelines refer to reporting obligations for States to international institutions as regards the EIAs which have been carried out in respect of activities under their jurisdiction and control?;
f. should the focus be on EIA or should comparable consideration be given to SEA? In that connection, reference to the cumulative effects on the marine environment of different activities should be considered;
g. should these guidelines also include a reference to the significance of monitoring and assessment of activities after an EIA has been carried out?;

h. should these guidelines deal with existing procedures in respect of EIA in ABNJ and how they would relate to generally applicable procedures? In that connection, particular attention might be required for the fisheries sector, in the light of the existing legal framework for fisheries, which does not envisage a general duty of EIA.
i. what should be the relationship between procedures in relation to different activities and how should they be harmonized?;
j. what should be said about the existing international institutions dealing with EIAs in ABNJ, such as the ISA and the Meetings of the Contracting Parties to the London Convention and its 1996 Protocol?;
k. what should be said about addressing gaps in knowledge and capacity-building and transfer of technology?; and
l. what should be said about the relationship between the global and regional level, both in respect of the formulation of the applicable procedures and in their implementation? It should be realized that the relationship between these two levels is not the same for all activities in ABNJ.