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Tools to conserve ocean biodiversity: developing the legal framework for environmental impact assessment in marine areas beyond national jurisdiction

Abstract

Several decades of endeavor since the 1972 Stockholm Declaration on the Human Environment have produced an established international law framework for the protection of the marine environment with the focal point being Part XII of the 1982 United Nations Convention on the Law of the Sea (LOSC), supplemented by complementary instruments on international environmental law and an evolving body of customary international law principles. Substantial jurisdiction with some collaboration between states in different regions to protect the marine environment across national boundaries. The regulatory framework for environmental protection in marine areas beyond national jurisdiction is at a much earlier stage in its development, gradually emerging against a background of increasing human activities in these vast ocean areas as threats to the rich repository of marine biodiversity beyond national jurisdiction are beginning to be recognized in different sectors of activity.

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Tools to Conserve Ocean Biodiversity: Developing the Legal Framework for Environmental Impact Assessment in Marine Areas beyond National Jurisdiction

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INTRODUCTION

Several decades of endeavour since the 1972 Stockholm Declaration on the Human Environment have produced an established international law framework for the protection of the marine environment, the focal point being Part XII of the 1982 UN Convention on the Law of the Sea supplemented by, complementary instruments on international environmental law and an evolving body of customary international law principles. Substantial implementation of this framework has occurred in marine areas within national jurisdiction with some collaboration between States in different regions to protect the marine environment across national boundaries. The regulatory framework for environmental protection in marine areas beyond national jurisdiction is at a much earlier stage in its development gradually emerging against a background of increasing human activities in these vast ocean areas and as threats to the rich repository of marine biodiversity beyond national jurisdiction begin to be recognised in existing and emerging sectors of activity. Environmental impact assessment (EIA) is acknowledged as a key element in the environmental protection inventory and its application to activities affecting the marine environment has been endorsed in a wide array of international law instruments and policy statements. Over the past three decades, there has been a gradual evolution and deepening of the concept of EIA for marine areas through a mix of treaty obligations and soft law principles.¹ The United Nations Convention on the Law of the Sea (LOSC) imposes a general

¹ Kevin Gray, "International Environmental Impact Assessment: Potential for a Multilateral Environmental Agreement," *Colorado Journal of International Environmental Law and Policy* (2000) pp.91-92.

obligation on States Parties to conduct EIA of activities under their jurisdiction or control which may cause substantial pollution of or significant and harmful changes to the marine environment.² This obligation has been supplemented by regional and sectoral instruments which contain more specific provisions on EIA such as the regional seas conventions, the 1991 Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol) and 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 (UN Fish Stocks Agreement). For transboundary impacts including those across adjacent marine areas, EIA has been further developed through the 1991 Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention). The related but more recent concept of strategic environmental assessment (SEA), refers to the formal systematic and comprehensive process of identifying and evaluating the environmental implications of proposed plans, programmes, policies and in some cases legislation to ensure that they are fully considered and addressed at the earliest stage of decision making. SEA is a more overarching concept than EIA and allows for more holistic, comprehensive and long term consideration of environmental considerations at the policy, planning and implementation levels. While EIA is often site specific and limited in time, SEA processes broaden the spatial and temporal range of environmental assessment often being applied to whole sectors of activity or geographic areas as an institutionalised part of decision making on a long term basis.³ At the global level, SEA has had limited impact so far, with

² 1982 UN Convention on the Law of the Sea (LOSC), Art.192;International Tribunal of the Law of the Sea, Advisory Opinion on Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, 1 February 2011, available online: http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf_p.44, paragraph 145. This recent advisory opinion of the International Tribunal on the Law of the Sea has acknowledged

the customary international law status of the obligation to conduct EIA for activities with the potential for significant impacts on the marine environment including in marine areas beyond national jurisdiction such as the Area.

³ Convention on Biological Diversity, *Background Document to an Expert Workshop on Scientific and Technical Aspects Relevant to Environmental Impact Assessment in Marine Areas Beyond National Jurisdiction*, UNEP/CBD/EW-EIAMA/1/INF/1/Add.1, 10 November 2009.

the 2003 Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (Kiev Protocol) being the main instrument containing SEA obligations.⁴ This article examines the scope of the current legal and institutional framework for EIA and SEA as it applies to marine areas beyond national jurisdiction and its implementation in sectoral and regional contexts. Gaps in the legal and institutional framework to implement EIA and SEA for activities affecting marine areas beyond national jurisdiction are discussed as well as the initiatives being taken by the international community to develop a more comprehensive legal and institutional framework for EIA and SEA in these areas of the ocean.

THE LEGAL AND INSTITUTIONAL LAW FRAMEWORK FOR ENVIRONMENTAL IMPACT ASSESSMENT OF ACTIVITIES AFFECTING MARINE AREAS BEYOND NATIONAL JURISDICTION

Global Instruments

United Nations Convention on the Law of the Sea (LOSC)

The LOSC provides for prior and ongoing EIA of activities likely to pollute or cause significant and harmful changes to the marine environment. Article 206 specifies that where 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. States must also keep under surveillance the effects of any activities they engage in or permit, to determine whether these activities are likely to pollute the marine environment (Article 204(2)). Articles 206 and 205 of the LOSC provide that States should publish reports of the results

⁴ Neil Craik, *The International Law of Environmental Impact Assessment* (New York, Cambridge University Press, 2008), p.29.

obtained at appropriate intervals to the competent international organizations, which should then make them available to all States. This procedural obligation complements an earlier obligation in Article 198 of the LOSC which requires a State that becomes aware of cases in which the marine environment is in imminent danger of being damaged or has been damaged by pollution, to immediately notify other States it deems likely to be affected by such damage as well as the competent international organizations. These general obligations to conduct EIAs contained in the LOSC must be read in conjunction with the more specific EIA principles and procedural provisions which have been developed in international environmental law instruments and associated guidelines.

United Nations Environmental Programme (UNEP) Goals and Principles of EIA

One of the earliest global elaborations of the objectives and fundamental procedures encompassed in EIA is the 1987 United Nations Environment Programme Goals and Principles of EIA (UNEP Principles).

Principle 1 specifies that an EIA should include, at a minimum:

- A description of the proposed activity;
- A description of the potentially affected environment, including specific information necessary for identifying and assessing the environmental effects of the proposed activity;
- A description of the practical alternatives, as appropriate;
- 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;
- An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;

- An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;
- An indication whether the environment of any other State or of areas beyond national jurisdiction are likely to be affected by the proposed activity or alternatives.

From the perspective of marine areas beyond national jurisdiction, this overarching statement of minimum requirements is significant as it highlights the need to include in EIAs an indication of whether proposed activities will affect areas beyond national jurisdiction. These areas are also mentioned in Principle 11 which specifies that States should endeavour to conclude bilateral, regional or multilateral arrangements so as to provide reciprocal notification, exchange of information and agreed upon consultation on the potential environmental effects of activities under their control or jurisdiction which are likely to significantly affect other States or areas beyond national jurisdiction.

The UNEP Principles list some of the mechanisms States can use to determine whether an activity is likely to significantly affect the environment, including:

- Lists of categories of activities that by their nature are, or are not, likely to have significant effects;
- Lists of areas that are of special importance or sensitivity (such as national parks or wetland areas), so that any activity affecting such areas is likely to have significant effects;
- Lists of categories of resources (such as water, tropical rain forests, etc.), or environmental problems (such as increased soil erosion, desertification, deforestation) which are of special concern, so that any diminution of such resources or exacerbation of such problems is likely to be significant;
- An initial environmental evaluation, i.e., a quick informal assessment of the proposed activity to determine whether its effects are likely to be significant; and
- Criteria to guide determinations on whether the effects of a proposed activity are likely to be significant.

The general obligation to consult with interested stakeholders on an EIA before a decision is made to proceed with an activity is recognized in Principle 7 which provides that:

“... government agencies, members of the public, experts in relevant disciplines and interested groups should be allowed appropriate opportunity to comment on the EIA.”

For activities affecting marine areas beyond national jurisdiction, this raises the question of who qualifies as an interested stakeholder and which organization is responsible for administering and responding to such consultation.

In relation to post EIA obligations, the UNEP Principles adopt a due diligence approach requiring the proponent to fully examine the potential environmental impacts of a particular project or activity and give due consideration to the interests of affected parties. Principle 9 contains a requirement for justification, specifying that the decision on any proposed activity subject to an EIA should be in writing, state the reasons, and include the provisions, if any, to prevent, reduce or mitigate damage to the environment, and that it should be made available to interested persons or groups.

Although the UNEP Principles do not extend the proponent's obligations beyond this due diligence approach, it could be argued that if an EIA concludes that significant harm is likely to marine areas beyond national jurisdiction, then under the international law duty to prevent transboundary harm set out in Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration and confirmed by the ICJ in their Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons , the

State conducting such an EIA would be under a positive obligation to mitigate that harm or refrain from the activity.⁵

Convention on Biological Diversity (CBD)

The 1992 Convention on Biological Diversity (CBD) linked Contracting Parties obligations to conduct EIAs more directly to the conservation of biodiversity in both marine and terrestrial environments.. Under its provisions, Contracting Parties must introduce appropriate procedures requiring EIA of proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects (Article 14 (1) (a)). Having identified processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, Contracting Parties must then monitor their effects through sampling and other techniques (Article 7(c)). This obligation applies to processes and activities, regardless of where their effects occur, carried out under the jurisdiction or control of Contracting Parties in areas under their national jurisdiction or beyond the limits of national jurisdiction (Art. 4 (b)) The critical importance of collaboration between States in minimizing adverse impacts to biodiversity in areas beyond national jurisdiction is emphasized in Article 14(1)(c) which requires Contracting Parties to promote reciprocal notification, exchange of information and consultation on activities under their jurisdiction or control which are likely to significantly affect adversely the biological diversity of other States or areas beyond the limits of national jurisdiction. In the case of imminent or grave danger or damage, originating under their jurisdiction or control, to biodiversity under the jurisdiction of other States or in areas beyond the limits of national jurisdiction, Contracting Parties must notify immediately the potentially affected States as well as initiate action to prevent or minimize such danger or damage.

These broadly conceived EIA obligations in the CBD have been supplemented by the CBD Voluntary Guidelines on Biodiversity- Inclusive Impact Assessment (CBD Guidelines) which emphasise the

⁵ International Court of Justice, Advisory Opinion on Legality of the Threat or Use of Nuclear Weapons, 8 July 1996, available online:< <http://www.icj-cij.org/docket/files/95/7495.pdf?PHPSESSID=244d61421d993dcdd51859ee9c657b1b>> , pp.241-242, paragraph 29; Craik, see n.4 above, p.67.

importance of including biodiversity-related criteria in the screening process.⁶ The CBD Guidelines specify the following questions related to biodiversity impacts which should be asked in any screening process:

- Would the intended activity affect the biophysical environment directly or indirectly in such a manner or cause such biological changes that it will increase risks of extinction of genotypes, cultivars, varieties, populations of species, or the chance of loss of habitats or ecosystems?
- Would the intended activity surpass the maximum sustainable yield, the carrying capacity of a habitat/ecosystem or the maximum allowable disturbance level of a resource, population, or ecosystem, taking into account the full spectrum of values of that resource, population or ecosystem?
- Would the intended activity result in changes to, and/or rights over biological resources?⁷

Instead of using negative or positive lists of types of activities which should be subject to EIA, the CBD Guidelines promote lists identifying those geographical areas where important biodiversity is found as a basis for determining which projects require an EIA.⁸ They also recommend that biodiversity expertise be included in expert teams assessing whether particular activities should be subject to EIA.⁹

The Guidelines elaborate on the types of impacts and alternatives which should be identified and examined in a biodiversity-inclusive EIA report. The recommended examination of impacts includes:

⁶ Convention on Biological Diversity, *Biodiversity in Impact Assessment. Background Document to Decision VIII/28 of the Convention on Biological Diversity. Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment*, available online: <http://www.cbd.int/doc/publications/cbd-ts-26-en.pdf>.

⁷ Id., p.23, paragraph 5.3(a).

⁸ Id., pp.24-26.

⁹ Id.

- Describing expected biophysical changes (in soil, water, flora, fauna) resulting from proposed activities or induced by any socio-economic changes caused by the activity;
- Determining the spatial and temporal scale of influence of each biophysical change;
- Identifying effects on connectivity between ecosystems, and potential cumulative effects;
- Describing ecosystems and land-use types lying within the range of influence of biophysical changes;
- Determining, for each of these ecosystems or land-use types, if biophysical changes are likely to have adverse impacts on biodiversity in terms of composition, structure (spatial and temporal) and key processes. Giving confidence levels in predictions, and take into account mitigation measures. Highlighting any irreversible impacts and any irreplaceable loss;
- For the affected areas collecting available information on baseline conditions and any anticipated trends in biodiversity in the absence of the proposal;
- Identifying, in consultation with stakeholders, the current and potential ecosystem services provided by the affected ecosystems or land-use types and determining the values these functions represent for society. Giving an indication of the main beneficiaries and those adversely affected from an ecosystem-services perspective, focusing on vulnerable stakeholders;
- Determining which of these services will be significantly affected by the proposed project, giving confidence levels in predictions, and taking into account mitigation measures. Highlighting any irreversible impacts and any irreplaceable loss.”¹⁰

The recommended examination of alternatives and mitigation measures includes:

- Defining possible alternatives including “no net biodiversity loss” or “biodiversity restoration” alternatives including location alternatives, scale alternatives, siting or lay-out alternatives, and/or technology alternatives;

¹⁰ Id., p.27.

- Defining possible measures to avoid, minimize or compensate for significant damage to, or loss of, biodiversity and/or ecosystem services and defining possibilities to enhance biodiversity.¹¹

The CBD Guidelines reflect a best practice standard for EIAs of activities with the potential to significantly affect all aspects of biodiversity including those components situated in marine areas beyond national jurisdiction. They depend on a detailed level of knowledge of the species, habitats and ecosystems and their interconnections in a particular marine area. A later section of this article will examine the process currently being undertaken in the CBD to define the special considerations to be taken into account in EIAs of activities with the potential to significantly affect biodiversity in marine and coastal areas including marine areas beyond national jurisdiction.

Convention on the Conservation of Migratory Species of Wild Animals (CMS)

The objective of the 1979 Convention on the Conservation of Migratory Species of Wild Animals CMS is to conserve migratory species of wild animals including certain marine species which migrate through marine areas within and beyond national jurisdiction, In its Resolution 7.2 on Impact Assessment and Migratory Species of 8 September 2002 the Conference of Parties (COP) of the CMS urged States to include in EIAs and SEAs “as complete a consideration as possible of effects involving impediments to migration, of transboundary effects on migratory species, and of impacts on migratory patterns or migratory ranges.” Obligations to conduct EIAs and SEAs are reflected in subsidiary agreements to the CMS relevant to species migrating through the marine environment. The 2006 Agreement for the Conservation of Albatross and Petrels provides in Annex 3 that the Parties shall assess the potential impact on albatrosses and petrels of policies, plans, programmes and projects which they consider likely to affect the conservation of albatrosses and petrels before any decision on whether to adopt such policies, plans, programmes and projects is made and to make the results of these assessments publicly available. The 1996 Agreement on the Conservation of Cetaceans of the

¹¹ Id.

Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) is even more rigorous, requiring Parties to carry out EIAs in order to provide a basis for either allowing or prohibiting the continuation or the future development of activities that may affect cetaceans or their habitat in the Agreement area. These activities include fisheries, offshore exploration and exploitation, nautical sports, tourism, and cetacean watching, as well as establishing the conditions under which such activities may be conducted. In Resolution No. 4, Adverse Effects of Sound, Vessels and other Forms of Disturbance on Small Cetaceans of 12 December 2006 to the 1991 Agreement on Small Cetaceans of the Baltic and North Seas (ASCOBANS), the Parties called for the development, with military and other relevant authorities, of effective mitigation measures, including EIAs and relevant standing orders, to reduce disturbance of and potential physical damage to small cetaceans.

Regional Instruments

Regional Sea Conventions

There is limited implementation of the LOSC obligations in some of the regional seas agreements. States Parties to these conventions are typically responsible for developing EIA guidelines, legislation and processes which prevent or minimize harmful effects on the Convention Area with the assistance of competent global, regional and sub-regional organizations. In most cases, the Convention Area is limited to marine areas within the national jurisdiction of Parties, although there are some regional seas conventions which include areas beyond national jurisdiction in their scope of application.¹² The conventions do not incorporate scoping and content prescriptions for EIA, leaving this responsibility to the more detailed legislative enactments of their member States.

¹² The scope of application of the 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, the 1992 Convention for the Protection of the Marine Environment of the North-east Atlantic (OSPAR Convention) and the 1995 Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) extend to marine areas beyond national jurisdiction.

Different versions of the duty to notify and consult on EIAs with other parties and the relevant regional seas organization appear in many of the conventions but most are relatively loose prescriptions urging rather than obligating States to disseminate results of EIAs and consult with affected Parties.¹³

The 1995 Barcelona Convention for the Protection of the Marine Environment and Coastal Region of the Mediterranean makes specific mention of notification and consultation among Contracting Parties where activities are likely to have a significant adverse effect on areas beyond national jurisdiction. Article 4(3) (c) provides that:

“(c) the Contracting Parties shall promote cooperation between and among States in environmental impact assessment procedures related to activities under their jurisdiction or control which are likely to have a significant adverse effect on the marine environment of other States or **areas beyond the limits of national jurisdiction** on the basis of notification, exchange of information and consultation.”

This provision recognises the mandatory responsibility of Contracting States to protect and preserve the marine environment beyond national jurisdiction in their region.

Madrid Protocol

The test applied for screening activities for environmental impact assessment under the Madrid Protocol to the Antarctic Treaty is more complex and multi-layered than many other international

¹³ Craik, see n.4 above, p.145.

instruments and clearly applies to marine areas beyond national jurisdiction although there are significant exceptions. The screening process has three levels – the preliminary assessment, initial environmental evaluation level and comprehensive environmental evaluation.¹⁴ A preliminary assessment is carried out at the national level for all activities subject to the Protocol with less than a minor or transitory impact. If an activity has no more than a minor or transitory impact, an initial environmental evaluation must be carried out, and if it has more than a minor or transitory impact, a comprehensive environmental evaluation must be carried out. All activities, both governmental and non-governmental, in the Antarctic treaty area (south of 60 degrees south latitude) are subject to these provisions, except for fishing, sealing, whaling and emergency operations, since these are covered by other international instruments.¹⁵

Guidelines for Environmental Impact Assessment in the Arctic (Arctic EIA Guidelines)

The Arctic EIA Guidelines, although not legally binding on Arctic States, suggest that they be applied across jurisdictional boundaries and in different EIA processes.¹⁶ They recommend that EIA should be applied to activities associated with the exploitation of both renewable and non-renewable natural resources, public use, military activities, and the development of infrastructure for different purposes that may cause significant environmental impacts.¹⁷ They note that the two main approaches adopted by Arctic States for deciding on the application of EIA procedures are mandatory assessment based on lists of environmentally harmful projects and case-by-case decisions.¹⁸ The Guidelines also note that the sensitivity of Arctic areas may justify the application of lower threshold levels for environmental impact assessment which recognise the sensitivity of Arctic areas and the potential for cumulative impacts.¹⁹ Sensitivity criteria in the marine context can be based on factors such as: time period of the project, the status of marine species, habitats and ecosystems in particular marine areas, the level of

¹⁴Madrid Protocol, Article 8(1), available online: <<http://www.antarctica.gov.au/antarctic-law-and-treaty/the-madrid-protocol/articles-1-to-10>>; Kees Bastmeijer and Ricardo Roura, “Environmental Impact Assessment in Antarctica” in Kees Bastmeijer and Timo Koivurova, *Theory and Practice of Transboundary Environmental Impact Assessment* (Leiden, Martinus Nijhoff Publishers, 2008), Chapter 9, p. 182.

¹⁵ *Id.*, Article 8(2).

¹⁶ Arctic Environment Protection Strategy, *Guidelines for Environmental Impact Assessment in the Arctic*, 1997, available online: <<http://ceq.hss.doe.gov/nepa/eiaguide.pdf>>, p.5.

¹⁷ *Id.*, p.11.

¹⁸ *Id.*

¹⁹ *Id.*, p.12.

production or quantities of emissions involved in a particular project, and the scientific and cultural significance of particular marine areas. The example is given of an EIA being undertaken for the first scientific expedition in Arctic waters of the Swedish icebreaker Oden in 1991 because of concerns about the effects of underwater noise, interference with marine mammals and exhaust emissions.²⁰

Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)

The Espoo Convention is the only specific international instrument on EIA and provides a detailed template for implementing transboundary assessment in marine areas. For its parties it steps beyond the softer obligations found in the regional seas conventions to a more fully fledged implementation of EIA for transboundary activities and projects. It employs a combination of mechanisms to determine whether a proposed activity is likely to have a significant adverse transboundary impact and should therefore be subject to an EIA. Parties are required to establish an environmental impact assessment procedure for activities listed in Appendix I that are likely to cause significant adverse transboundary impact.²¹ Of the activities listed in Appendix I, large-diameter oil and gas pipelines and offshore hydrocarbon production are relevant for their potential to affect biodiversity beyond national jurisdiction (both the high seas water column and the deep seabed beyond national jurisdiction). Appendix III sets out the following general criteria to assist in determining whether an activity is likely to have a significant adverse transboundary impact:

- Size: proposed activities which are large for the type of activity;
- Location: proposed activities which are located in or close to an area of special environmental sensitivity or importance (such as wetlands designated under the

²⁰ Id.

²¹ Espoo Convention, Article 2(2), available online: http://live.unece.org/env/eia/about/eia_text.html#article2 Article 2(2).

RAMSAR Convention, national parks, nature reserves, sites of special scientific interest, or sites of archaeological, cultural or historical importance); also, proposed activities in locations where the characteristics of the proposed development would be likely to have significant effects on the population;

- Effects: proposed activities with particularly complex and potentially adverse effects, including those giving rise to serious effects on humans or on valued species or organisms, those which threaten the existing or potential use of an affected area, and those causing additional loading which cannot be sustained by the carrying capacity of the environment.

The Espoo Convention does not currently require EIAs to be conducted for activities with the potential for significant impacts on marine areas beyond national jurisdiction although the possibility of negotiating a protocol to the Convention which provides for such assessments would be open to the Parties. At the sub-regional level, the Espoo Convention has prompted the ongoing negotiation of the draft Protocol on Environmental Impact Assessment in a Transboundary Context in the Caspian Sea Region to the 2003 Framework Convention on the Protection of the Marine Environment of the Caspian Sea.²² This instrument, using the threshold of significant adverse effect on the marine environment, lists activities in Appendix I which are recognized as being likely to cause significant adverse transboundary environmental impacts. These include oil, gas and petrochemical industry exploration and extraction activities, the laying at the bottom of the sea of oil and gas pipelines, construction of artificial islands, spits and reefs in the coastal zone, introduction of species alien to natural ecological systems, and plans, programmes, concepts, and other documents aimed at the solution of global environmental problems, such as preservation of the ozone layer and biodiversity, which are likely to affect the marine environment of the Caspian Sea.

2003 Protocol on Strategic Environmental Assessment to the Espoo Convention (Kiev Protocol)

²² Caspian Sea Protocol, available online: <http://live.unece.org/env/eia/subregions/caspian1.html>.

At the global level, the key instrument on strategic environmental assessment is the 2003 Protocol on SEA to the Espoo Convention (Kiev Protocol) which focuses on SEA in a transboundary context.²³ It obligates States Parties to carry out SEAs for specified plans and programmes which are likely to have significant environmental and health effects and to endeavour to ensure that environmental, including health concerns are considered and integrated in the preparation of proposals for policies and legislation that are likely to have significant effects on the environment. For plans and programmes, the Kiev Protocol imports some of the same procedural stages as EIA into its definition of SEA . Article 2(6) of the Protocol defines SEA as:

“the evaluation of the likely environmental effects, including health effects, which comprises the determination of the scope of an environmental report and its preparation, the carrying out of public participation and consultations and the taking into account of the environmental report and the results of public participation and consultations in a plan or programme.”

The ambit of the Kiev Protocol is wide, with SEAs being required for plans and programmes which are prepared for agriculture, forestry, fisheries, energy, industry including mining, transport, regional development, waste management, telecommunications, tourism, town and country planning and land use which set the framework for future development consent for projects listed in Annex I. and for projects listed in Annex II which require an EIA under national legislation. The Kiev Protocol’s provisions are not limited to plans and programmes which have transboundary environmental effects as with the Espoo Convention, but apply to environmental effects wherever they occur.

Projects listed in Annexes I and II which could have the potential for significant effects on marine biodiversity beyond national jurisdiction include offshore hydrocarbon production, intensive fish farming, the laying of pipelines for transport of gas, oil or chemicals and installations for the harnessing of wind power for energy production. For plans and programmes setting the framework for future development consent, other than those specified for automatic application of SEA in the Protocol, Parties must assess, using either a case by case examination or specific listing or a

²³ Kiev Protocol, available online:http://live.unece.org/env/eia/about/sea_text.html.

combination of both methods, whether they are likely to have significant environmental effects, including health effects. Annex III to the Protocol provides criteria to be taken into account in this assessment. Some of the criteria contained in Annex III would be particularly relevant if States were conducting SEAs for plans and programmes likely to have significant environmental effects on marine biodiversity beyond national jurisdiction. These include:

- The transboundary nature of effects
- The degree to which the plan or programme will affect valuable or vulnerable areas, including landscapes with a recognized national or international protection status
- The nature of the environmental, including health effects, such as probability, duration, frequency, reversibility, magnitude and extent (such as geographical area or size of population likely to be affected).

The scoping provisions of the Kiev Protocol are very comprehensive, requiring States Parties to prepare an environmental report on plans and programmes subject to SEA which identifies, describes and evaluates the likely significant, environmental effects, including health effects, of implementing the plan or programme and its reasonable alternatives. Annex IV to the Protocol prescribes the information required in this report which, in addition to the typical content of an EIA, includes a description of the likely significant transboundary environmental effects of plans and programmes and the environmental objectives established at international, national and other levels which are relevant to the plan or programme and the ways in which these have been taken into account during its preparation.

States Parties to the Kiev Protocol must provide early, timely and effective opportunities for public participation in the SEA of relevant plans and programmes. The public for these purposes is defined in Article 8(3) of the Protocol as including relevant non governmental organizations. States Parties must consult with other States Parties likely to be affected by significant transboundary environmental effects of a plan or programme (Article 10). The final decision on a plan or a programme must take due account of the conclusions of the environmental report, the measures to prevent, reduce or

mitigate the adverse effects identified in the report and the results of public and transboundary consultations (Article 11). Post SEA, States Parties have an obligation to monitor the significant environmental effects, including health effects, of plans and programmes which have been subject to SEA and to identify and remedy unforeseen adverse effects at an early stage. (Article 12).

Sectoral Instruments

UN Fish Stocks Agreement

In the fisheries sector, the UN Fish Stocks Agreement requires States to 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, to develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and to adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern.²⁴ This obligation is elaborated in the 2009 FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas (Deep Sea Fishing Guidelines), which were developed to help States and regional fisheries management organizations and arrangements implement a call from the United Nations General Assembly (UNGA) to prevent significant adverse impacts on vulnerable marine ecosystems or not to authorize the bottom fishing activity to proceed (UNGA Resolution 61/105 paragraphs 80-91).²⁵ In the Guidelines, significant adverse impacts are defined as those that compromise ecosystem integrity (i.e., ecosystem structure or function) in a manner that:

- (i) impairs the ability of affected populations to repair themselves;
- (ii) degrades the long-term natural productivity of habitats;
- (iii) causes, on more than a temporary basis, significant loss of species richness,

²⁴ UN Fish Stocks Agreement, available online: http://www.un.org/Depts/los/convention_agreements/texts/fish_stocks_agreement/CONF164_37.htm, Articles 5(d) and 6(3)(d).

²⁵ FAO, *International Guidelines for the Management of Deep Sea Fisheries in the High Seas*, 2009, available online: <http://www.fao.org/docrep/011/0816t/0816t00.htm>.

habitat or community types.²⁶

The Guidelines also specify that impacts should be evaluated individually, in combination and cumulatively.²⁷ They call for States to conduct assessments of individual bottom fishing activities, and to adopt measures to prevent significant adverse impacts on vulnerable marine ecosystems (VMEs). These procedures include identifying areas or features where VMEs are known or likely to occur and the location of fisheries in relation to these areas and features, and then developing data collection and research programmes to assess the impact of fishing on target and non-target species and their environment.²⁸ The Guidelines list the characteristics of VMEs which should be subject to assessments and give examples of potentially vulnerable species groups, communities and habitats, as well as features that potentially support them.²⁹

1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) and 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Protocol)

In the shipping sector, only a limited number of activities that ships may engage in beyond national jurisdiction, such as dumping of wastes and ocean fertilization, are subject to risk and environmental assessment processes. For States Parties to the London Convention, dumping of non-prohibited substances is only allowed subject to the requirements of prior environmental impact assessment, permitting and ongoing monitoring set out in Annex III of the Convention.³⁰ For States Parties to the London Protocol, dumping of all waste and other matter is prohibited, except for five listed categories of substances the dumping of which is nevertheless subject to the stringent assessment, permitting and on-going monitoring requirements of Annex 2 of the Protocol.³¹ Any application for a permit to dump these listed substances must be accompanied by an assessment of the sea disposal options, including

²⁶ Id., p.4, paragraph 17.

²⁷ Id.

²⁸ Id., pp 9-11.

²⁹ Id., p.4, paragraphs 14-16.

³⁰ London Convention, Article IV and Annex III, available online: http://www5.imo.org/SharePoint/blastDataHelper.asp/data_id%3D16925/LC1972.pdf.

³¹ London Protocol. Article 4 and Annex 2, available online: <http://www.austlii.edu.au/au/other/dfat/treaties/2006/11.html>.

information on waste characteristics, conditions at the proposed dump site, fluxes and proposed disposal techniques and specify the potential effects on human health, living resources, amenities and other legitimate uses of the sea. These assessments can apply to dumping of wastes in marine areas beyond national jurisdiction as well as to areas within national jurisdiction.

In May 2007 the parties to the London Convention and London Protocol were confronted for the first time with proposals for large scale commercial ocean iron fertilisation projects. Some US and Australian companies were promoting ocean fertilisation as a tool to buffer ocean acidity, replenish the marine food chain and sequester CO₂, while inviting investors and green co-sponsors to finance their activities in return for the provision of carbon credits to offset investors' CO₂ emissions. A 'statement of concern' adopted by the Scientific Groups of the London Convention and/London Protocol in July 2007 'noted with concern the potential for [ocean fertilisation activities] to have negative impacts on the marine environment and human health' and recommended that the parties to the London Convention and/London Protocol consider the issue with a view to its regulation.³² This 'statement of concern' was endorsed by the States Parties during their joint annual meeting in November 2007 where the parties agreed that while it was within the purview of each State to consider proposals for ocean fertilisation projects on a case by case basis in accordance with the Convention and/or Protocol, knowledge about the effectiveness and potential environmental impacts of open ocean fertilisation was currently insufficient to justify large scale projects. They also agreed that ocean fertilisation fell within their regulatory competence and that they would 'further study this issue from scientific and legal perspectives with a view to its regulation'.³³

The ongoing discussions in the London Convention/London Protocol Scientific Groups concerning ocean fertilisation prompted the Conference of the Parties of the Convention on Biological Diversity at their 9th meeting in May 2008 to request Parties and urge other Governments 'in accordance with the precautionary approach to ensure that ocean fertilization activities do not take place until there is

³² LC/LP Scientific Groups, 'Statement of Concern Regarding Iron Fertilisation of the Ocean to Sequester CO₂', Doc. LC-LP.1/Circ.14, 13 July 2007

³³ International Maritime Organisation, *Report of the 29th Consultative Meeting of the Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and 2nd Meeting of the Contracting Parties to the 1996 Protocol thereto*, IMO Doc. LC29/LP2 (2007).

an adequate scientific basis on which to justify such activities, including assessing associated risks, and a global transparent and effective control and regulatory mechanism is in place for those activities; with the exception of small scale scientific research within national jurisdiction.’³⁴ An exception was noted in the case of ‘small scale scientific research studies within coastal waters’, which ‘should only be authorised if justified by the need to gather specific scientific data, and should also be subject to a thorough prior assessment of the potential impacts of the research studies on the marine environment, and be strictly controlled, and not be used for generating and selling carbon offsets or any other commercial purposes.’³⁵

In October 2008 the parties to the London Convention and London Protocol adopted a non-binding resolution agreeing that, ‘given the present state of knowledge ocean fertilization activities other than legitimate scientific research should not be allowed’ and that ‘ocean fertilisation activities other than legitimate scientific research, should be considered as contrary to the aims of the Convention and Protocol and not currently qualify for any exemption from the definition of dumping’.³⁶ They identified the need for preparatory work on technical and scientific issues and agreed to further consider a potentially legally binding resolution or an amendment to the London Protocol at their 2009 session. An intersessional Technical Working Group on Ocean Fertilisation was established to develop an Assessment Framework for Scientific Research Involving Ocean Fertilisation to provide a mechanism for assessing, on a case-by-case basis, whether proposals for ocean fertilisation activities represent legitimate scientific research.³⁷ The draft Assessment Framework³⁸ was reviewed by the Scientific Groups in June 2009 and adopted as a ‘work in progress’.³⁹ The draft was tabled again

³⁴ ‘COP 9 Decision XI/16 on Biodiversity and Climate Change’ (Presented at the Ninth Meeting of the States Parties to the Convention on Biological Diversity (COP 9), Bonn, 19–30 May 2008) Section C, <<http://www.cbd.int/decisions/cop9/?m=COP-09&id=11659&lg=0>> at 27 August 2008.

³⁵ Id.

³⁶ Resolution LC/LP.1 (2008), *Report of the 30th Consultative Meeting of the Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and 3rd Meeting of the Contracting Parties to the 1996 Protocol thereto*, IMO Doc LC30/16, 9 December 2008, paras 4.1-4.18 and Annexes 2 and 5

³⁷ LC.30/16, paragraph 2.3.

³⁸ LC/SG-CO2 3/5, annex 2

³⁹ LC/SG 32/15, paras 2.18 – 2.29

during an extraordinary session of the Scientific Groups in October 2010⁴⁰ where further revisions were made and it was adopted, by consensus, in a non-binding resolution at the October 2010 meeting of the parties.⁴¹

The Assessment Framework (AF) describes itself as a ‘tool ... to determine if the proposed activity constitutes legitimate scientific research that is not contrary to the [LC/LP] aims’. It sets out a two stage process involving an Initial Assessment and an Environmental Assessment. The purpose of the Initial Assessment is to determine whether the proposed OF activity constitutes legitimate scientific research. To qualify as such the proposed activity must have ‘proper scientific attributes’, which means:

1. The proposed activity should be designed to answer questions that will add to the body of scientific knowledge. Proposals should state their rationale, research goals, scientific hypotheses and methods, scale, timings and locations with clear justification for why the expected outcomes cannot reasonably be achieved by other methods;
2. Economic interests should not influence the design, conduct and /or outcomes of the proposed activity. There should not be any financial and/or economic gain arising directly from the experiment or its outcomes. This should not preclude payment for services rendered in support of the experiment or the future financial impacts of patented technology;
3. The proposed activity should be subject to scientific peer-review at appropriate stages in the assessment process. The outcomes of the scientific peer review should be taken into consideration by the Contracting Parties. The peer review methodology should be stated and the outcomes of the peer review of successful proposals should be made publicly available together with the details of the project. ... and;

⁴⁰ See Draft Assessment Framework for Scientific research Involving Ocean Fertilisation Doc LC/SG/ES.2, 30 July 2010

⁴¹ 32nd Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Convention) and 5th Meeting of Contracting Parties to the 1996 Protocol thereto (London Protocol)

4. The proponents of the proposed activity should make a commitment to publish the results in peer-reviewed scientific publications and include a plan in the proposal to make the data and outcomes publicly available in a specified time frame.

Proposals that meet these criteria may then proceed to the next stage, the Environmental Assessment which includes requirements of risk management and monitoring. The Environmental Assessment stage entails a number of components including the problem formulation, a site selection and description, an exposure assessment, an effects assessment, risk characterization and risk management sections.⁴² Only after completion of the Environmental Assessment, is it decided whether the proposed activity constitutes legitimate scientific research that is not contrary to the aims of the London Convention and/London Protocol and should thus be permitted to proceed.

Deep Seabed Mining Instruments under the LOSC Part XI

Deep seabed mining activities beyond national jurisdiction are subject to a well developed framework of environmental impact assessment obligations. An exploration contractor must submit an assessment of the potential environmental impacts of proposed activities with an application for approval of a plan of work together with a description of a programme for oceanographic and baseline environmental studies in accordance with the rules, regulations and procedures adopted by the International Seabed Authority (ISA).⁴³ This obligation is reiterated in Regulation 18 (c) and (d) of the ISA's Regulations for the Prospecting and Exploration of Polymetallic Nodules (Polymetallic Nodules Regulations) which provides that applicants for exploration contracts must submit a preliminary assessment of the possible impact of the proposed exploration activities on the marine environment and a description of proposed measures for the prevention, reduction, and control of

⁴² Assessment Framework for Scientific Research Involving Ocean Fertilization, LC 32/15, Annex 6, pp.5-19, available online: <http://www.imo.org/SharePoint/blastDataHelper.asp/data_id%3D30641/AssessmentFramework-annex6-LC-32-15.pdf>.

⁴³ Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Part XI Implementing Agreement, 1994, available online: http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindxAgree.htm, Annex, paragraph 7.

possible impacts on the marine environment to the ISA.⁴⁴ Regulation 20 (b), (c) and (d) of the Regulations for Prospecting and Exploration of Polymetallic Sulphides (Polymetallic Sulphides Regulations) is even more stringent requiring applicants for exploration contracts to provide a description of the programme for oceanographic and environmental baseline studies that would enable an assessment of the potential environmental impact, including but not restricted to the impact on biodiversity of the proposed exploration activities, a preliminary assessment of the possible impact of the proposed exploration activities on the marine environment, and a description of proposed measures for the prevention, reduction and control of possible impacts on the marine environment.⁴⁵ The Recommendations for the Guidance of the Contractors for the Assessment of the Possible Environmental Impacts Arising from Exploration for Polymetallic Nodules in the Area, issued by the Authority's Legal and Technical Commission in 2002 specify the particular activities of exploration contractors which are subject to EIA.⁴⁶ The sponsoring State for an exploration contractor is under a due diligence obligation to ensure that an exploration contractor fulfils all these obligations.⁴⁷

GAPS IN THE LEGAL AND INSTITUTIONAL FRAMEWORK

Although there is a well established conventional and customary international law obligation to conduct EIAs of activities with the potential for significant impacts on the marine environment and some obligations at the regional level to conduct SEAs of plans programmes and policies with the potential for significant impacts on the marine environment, progress in implementing these obligations for marine areas beyond national jurisdiction is at an embryonic stage. In the fisheries sector, the FAO's Deep Sea Fishing Guidelines apply only to bottom fishing activities rather than all high seas fishing and aquaculture activities and rely on the variable standards inherent in flag State implementation either individually or through regional fisheries management organizations. While

⁴⁴Regulations for Prospecting and Exploration of Polymetallic Nodules (Polymetallic Nodule Regulations), available online: <http://www.isa.org.jm/files/documents/EN/Regs/PN-en.pdf>, Regulation 18(c) and (d).

⁴⁵ Regulations for Prospecting and Exploration of Polymetallic Sulphides (Polymetallic Sulphide Regulations), available online: <http://www.isa.org.jm/files/documents/EN/Regs/Polymetallic Sulphides.pdf>, Regulation 20(c) and (d).

⁴⁶ Recommendations for the Guidance of Contractors for the Assessment of the Possible Environmental Impacts Arising from Exploration for Polymetallic Nodules in the Area, available online: http://www.isa.org.jm/files/documents/EN/7Sess/LTC/isba_7lrc_1Rev1.pdf, paragraph 10.

⁴⁷ ITLOS Advisory Opinion, n.2 above, pp.43-44, paragraphs 141-143; Polymetallic Nodules Regulation 31(6) and Polymetallic Sulphide Regulation 33(6)..

dumping at sea and small scale ocean fertilisation experiments are subject to risk assessment processes for States Parties to the London Convention and London Protocol, with an environmental assessment component in the case of ocean fertilisation, there are many other activities involving ships in marine areas beyond national jurisdiction such as oil and gas exploration, marine scientific research, survey activities, marine geo-engineering, deep sea tourism and military activities which are not subject to any EIA process. In most cases the EIA obligations in regional seas conventions do not require member States to assess the impact of their activities on the marine environment beyond national jurisdiction as the geographic scope of the conventions do not extend to these areas. Institutional coverage for marine areas beyond national jurisdiction is far from comprehensive with only a few regional seas programs having specific environmental protection responsibilities for these areas. At the global level, the ISA has a comprehensive environmental protection powers for activities affecting the Area but this advanced environmental governance situation for the deep seabed beyond national jurisdiction is not matched by a global institution with comparable environmental protection powers for the high seas water column. In the absence of an overarching global institution with environmental protection responsibilities for the high seas water column, the development of best practice standards for EIA and SEA of activities affecting the marine environment and overall monitoring of the implementation of EIA and SEA obligations in relation to the high seas is made more difficult.

GLOBAL INITIATIVES TO DEVELOP THE LEGAL AND INSTITUTIONAL FRAMEWORK FOR EIA IN MARINE AREAS BEYOND NATIONAL JURISDICTION

UNGA Initiatives

In the four meetings since its inception in 2005, the United Nations General Assembly Ad Hoc Open-ended Informal Working Group to study issues related to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (BBNJ Working Group) has consistently identified EIA for activities affecting marine areas beyond national jurisdiction (ABNJ) as an important component in conserving marine biodiversity beyond national jurisdiction. At the

first meeting of the Working Group, the Co-Chairpersons noted that the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction should be based on the precautionary and ecosystem approaches using the best available science, and prior environmental impact assessments.⁴⁸ In 2008, the Co Chairpersons of the Working Group provided further endorsement for EIA as a significant element in the conservation of marine biodiversity beyond national jurisdiction commenting that the UNGA may wish to refer the development and implementation of effective environmental impact assessments as a tool for improving ocean management to the Working Group for further study.⁴⁹ In 2010, the Co Chairpersons of the Working Group identified as a key issue requiring more background studies, the review of approaches to environmental impact assessments, including in the context of the ISA and the regional seas programmes and determining commonalities and best practices.⁵⁰ Finally in 2011, the Co-Chairpersons of the Working Group recommended to the UNGA that a process be initiated, by the General Assembly, with a view to ensure that the legal framework for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction effectively addresses those issues by identifying gaps and ways forward, including through the implementation of existing instruments and the possible development of a multilateral agreement under the LOSC. In particular it was recommended that the process address, among other things, measures such as EIA.⁵¹

CBD Initiatives

⁴⁸ Report of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, 20 March 2006, available online: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N06/277/50/PDF/NO627750.pdf?OpenElement>, Annex I, paragraph 5.

⁴⁹ Letter from the Co-Chairpersons of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction addressed to the President of the General Assembly, 16 May 2008, available online: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N08/344/16/PDF/NO834416.pdf?OpenElement>, paragraph 54 c).

⁵⁰ Letter from the Co-Chairpersons of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, 17 March 2010, available online: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N10/277/20/PDF/N1027720.pdf?OpenElement>, paragraph 80(g).

⁵¹ Letter from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, 30 June 2011, available online: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/397/64/PDF/N1139764.pdf?OpenElement>, Annex, Section I, paragraphs (a) and (b).

In support of the BBNJ Working Group's study of issues related to the conservation of marine biodiversity beyond areas of national jurisdiction and, in particular its focus on EIA, the Conference of the Parties of the CBD (COP CBD) convened an Expert Workshop on Scientific and Technical Elements of CBD Voluntary Biodiversity Inclusive EIA Guidelines for Marine Areas beyond National Jurisdiction in Manila November 2009.⁵² This workshop highlighted ecological, governance and practical differences related to the implementation of EIA and SEA for activities with the potential for significant impacts on marine biodiversity beyond national jurisdiction. Key ecological differences noted in the Workshop Report were that:

- The great depth of many ocean areas beyond national jurisdiction creates extreme conditions for biodiversity-pressure changes, lower temperatures and lack of oxygen.
- Most ocean areas beyond national jurisdiction have lower primary and secondary productivity meaning that populations and communities can sustain lower levels of perturbation without serious adverse impacts;
- Recovery from perturbations for most species and ecosystems in marine areas beyond national jurisdiction is longer than for coastal and terrestrial ecosystems;
- Connectivity of coastal to deepwater ecosystems is likely to be much looser than between ecosystems along shore; and.
- Not as much is known about the migratory and dispersal characteristics of benthic species beyond national jurisdiction.⁵³

The Workshop Report emphasised the practical difficulties associated with conducting EIA including that:

⁵² Report of the Expert Workshop on Scientific and Technical Aspects relevant to Environmental Impact Assessment in Marine Areas beyond National Jurisdiction, UNEP/CBD/EW-EIAMA/2, 20 November 2009, available online: <http://www.cbd.int/doc/?meeting=EWEIAMA-01>.

⁵³ Id., Annex II, paragraphs 3-6.

- The industry proposing the activity and the national flag State jurisdiction are often far from the marine area affected;
- The conduct of EIA and management, control, monitoring, surveillance and follow up activity were likely to be more costly and may be less effective for a given budget; and
- Capacity building needs for EIA in marine areas beyond national jurisdiction would be greater as customs of practice are less established, methodologies less mature and multiple assessment cultures may converge in same area.⁵⁴

In relation to the legal and institutional framework for EIA of activities affecting marine areas beyond national jurisdiction, the Workshop Report highlighted its complex and fragmentary characteristics referring to the following factors:

- Different legal framework for marine areas beyond national jurisdiction – high seas (UNCLOS Part VII) and deep seabed beyond national jurisdiction – the Area (Part XI UNCLOS and Part XI Implementing Agreement).
- The different institutional framework for marine areas beyond national jurisdiction including global and regional organizations as well as flag State jurisdiction and that cooperation is required between all these components to conserve the biodiversity of these areas;
- The UNGA has a central role in matters relating to conserving marine biodiversity beyond national jurisdiction;
- Stakeholders are harder to define for marine areas beyond national jurisdiction because communities do not have immediate proximity to these areas; and
- International conventions contain certain obligations relating to EIA and SEA but there are variable standards of compliance among States.⁵⁵

The Workshop Report identified the need for:

⁵⁴ Id., Annex II, paragraphs 10-14.

⁵⁵ Id., Annex II, paragraphs 7-9.

- Global and, where appropriate, regional standards for acceptable perturbation
- Compilation of global experiences on how oceanic ecosystems have responded to past human impacts and natural forces, and how effective mitigation measures have been
- A better understanding of the connectivity between impacts and ecosystem processes within and beyond national jurisdictions⁵⁶

For SEA, the Workshop reviewed the CBD's Guidance Document on Biodiversity Inclusive SEA adopted by the eighth meeting of the COP CBD in 2006 (Decision VIII/28) and identified elements which were lacking in this guidance in relation to marine areas beyond national jurisdiction as well as specific characteristics and ecosystems that must be considered in undertaking SEA in these areas.⁵⁷

The Workshop report highlighted a number of direct and indirect drivers of biophysical and on biophysical changes to ecosystems which should trigger the conduct of SEAs for plans programmes and policies affecting marine areas beyond national jurisdiction. These included commercial activities such as trade and shipping patterns, fisheries, extraction of non living resources, bioprospecting, climate change mitigation activities, the laying of pipelines and cables on the seabed, waste disposal and technological improvements to navigation, fishing equipment, mapping and visualisation capabilities.⁵⁸

The Workshop's Report was considered by the tenth COP CBD in 2010 which requested the Executive Secretary of the CBD to facilitate the development of voluntary guidelines for the consideration of biodiversity in EIAs and SEAs in marine and coastal areas using the guidance in Annexes II, III and IV to the Manila Workshop Report, to provide for technical peer review of the guidelines and to submit them for consideration to a future meeting of the SBSTTA prior to the eleventh meeting of COP CBD in 2012.⁵⁹ The decision impliedly recognised the existence of some sectoral EIA processes for activities affecting marine areas beyond national jurisdiction by

⁵⁶ Id., Annex II, paragraphs 16-18.

⁵⁷ Id., Annex IV, paragraphs 8-9.

⁵⁸ Id., Annex IV, paragraph 14.

⁵⁹ Report of the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity, UNEP/CBD/COP/10/27, 20 January 2011, Annex, Decision X/29, paragraph 50, available online: <http://www.cbd.int/cop10/doc/>.

acknowledging the Guidelines would be most useful for activities that are currently unregulated with process of assessing impacts. The also requested that the guidelines be developed for all marine and coastal areas rather than simply for marine areas beyond national jurisdiction emphasizing the interconnections between ocean ecosystems across jurisdictional boundaries.

CONCLUSION

There is an established basis for the obligation to conduct EIAs of activities with the potential for significant impacts on the marine environment in both customary and conventional international law. There are also recognized customs of practice for implementing this obligation in the majority of marine areas within national jurisdiction supported by national legislation and policy. In addition there is emerging regional and national practice relating to the conduct of SEA of plans, programmes and policies with the potential for significant impacts on the marine environment. This article has explored the basis in international law for the obligation to conduct EIA of activities with the potential to significantly affect marine biodiversity beyond national jurisdiction and its implementation in limited sectoral contexts including deep sea fishing, dumping of wastes at sea, ocean fertilization experiments and deep seabed mining. Propelled by the impetus of increasing human impacts on the oceans including marine areas beyond national jurisdiction, the global community, through the BBNJ Working Group and the scientific and technical support of the COP CBD, have supported the development of Voluntary Guidelines on Biodiversity-Inclusive EIA and SEA for Marine and Coastal Areas as a whole taking into account the specific ecological, governance and practical differences associated with conducting EIAs and SEAs of activities, plans programmes and policies affecting marine biodiversity beyond national jurisdiction. This initiative represents an important step in articulating the peculiar characteristics of EIAs and SEAs related to activities affecting marine areas beyond national jurisdiction and should provide a catalyst for more comprehensive implementation of these important tools in these areas across all regions and sectors.