

1 Introduction

1.1 Expanding activities in the Arctic Ocean (AO)

The accelerating reduction of the sea ice in the Arctic Ocean (AO) is one of the most visible signs of climate change in the Arctic. During the record summer melt in September 2007 the sea ice was reduced to about half of the average extent from the 1950s. Predictions show that larger areas will be open water for longer periods of time, ultimately leading to mostly ice-free late summers. Multi-year ice will then have disappeared, leaving a thinner winter sea ice that will be easier to navigate. When this will happen is impossible to predict with confidence, but models now suggest in a much closer future than they did just a few years ago.¹

Less sea ice will pave the way for expanded economic activities in the AO. Large hydrocarbon reserves may exist in the Arctic, and *offshore oil and gas* activities are slowly increasing.² The possibility of transcontinental *shipping* across the Arctic has also received much attention, though a gradual expansion of shipping to and from destinations within the Arctic is more likely in the nearer future.³ *Fisheries* may become richer in a new climatic regime, but it is also possible that the primary production may not effectively reach the most interesting commercial fish stocks. Ship-borne *tourism* is a popular and rapid-growing industry.⁴ Activities like scientific research and bioprospecting may also expand, while new developments like mining on the sea-floor and CO₂-sequestration may occur in the future.

While a warmer climate paves the way, complex socioeconomic drivers will determine the development of these activities. Examples are prices on the world market, technology, infrastructure and Arctic governance.⁵ This puts additional uncertainty on predictions of the exact nature and pace of future developments. However, it is safe to state that economic activities in the Arctic Ocean will expand.⁶ This will bring new economic benefits, but also

¹ See Arctic sea ice indicator in EEA 2008 with further references

² Arctic Council (AC) 2008

³ AC 2009

⁴ UNEP 2007

⁵ For a good analysis of drivers in Arctic shipping, see Brunstad 2007.

⁶ AC 2004, 2008 and 2009

new pressures on environment and society. If not managed properly, the Arctic marine environment may undergo a double negative change, both due to a warmer climate and poor management of the new activities following the melt.

1.2 Arctic governance under pressure

Rapid and unpredictable changes put the existing mechanisms for Arctic governance under pressure. Regimes that were established to meet other challenges may not give adequate responses any more. With slow and steady change, they may have time to evolve and modify gradually. Now the time to adapt is getting shorter.

1.2.1 Governance mechanisms for the AO

The discussions about governance in the AO can broadly be divided into issues concerning delimitations and jurisdiction, and management of human activities where protection of the environment has a prominent place.⁷ The Law of the Sea Convention (LOSC) addresses both these issue domains. It is an overarching legal framework with a constitutional character, establishing basic principles and with ample references to global and regional mechanisms as the instruments for concrete regulation. Globally this has been taken up by several international organizations (like the International Maritime Organization⁸). Regionally, states collaborate in regional seas conventions (like the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, best known as OSPAR) and regional fisheries bodies (like the 1980 Convention on Future Multilateral Co-operation in the North-East Atlantic Fisheries, best known as NEAFC). States also collaborate directly (like the Norwegian-Russian fisheries commission). The law of the sea therefore consists of a network of treaties, principles and guiding documents, managed through a variety of competent international organizations and arrangements.⁹

⁷ Rayfuse 2007:203-14

⁸ IMO is the most prominent example since it has been the platform for negotiating and managing ap. 50 international treaties regulating international shipping

⁹ Churchill and Lowe 2003

A number of other international legal frameworks also apply to the Arctic. Multilateral environmental agreements (MEAs) are of special interest for the current discussion.¹⁰ Interpreted together with the law of the sea, often in a dynamic interplay, they form the central part of the international legal system for the AO. The national legal systems also include legislation at sub-national level within the three federal states Canada, Russia and the USA.¹¹ EU law applies to some Arctic states, but has less importance in the AO.¹²

Collaborative arrangements in the Arctic evolved rapidly after the end of the cold war. The Arctic Council (AC) is the most important forum when it comes to environmental and sustainable development issues¹³. The members are the eight states that often are referred to as the Arctic states, with indigenous organizations as permanent participants and a variety of observers including some non-Arctic states. It has had success in shaping the understanding of the Arctic by assessing the state of the environment and human development in the region.¹⁴ The AC is not an international organization with legal personality. It has no regulatory power, but has in some cases tried to influence regulatory jurisdictions particularly on pollution and climate change, more recently also on shipping. It has also come up with a number of guidelines and other recommendations. The influence of these is hard to evaluate since there is no systematic report and review mechanism in place.

1.2.2 Gaps in Arctic marine governance

The collaboration in the Arctic certainly has demonstrated innovative features. But Arctic governance has also been characterized as fragmented, lacking effective instruments, poorly institutionalized and with insufficient participation.¹⁵ In the marine areas, major shortcomings reflect general weaknesses in the international ocean governance. Several activities lack a

¹⁰ See 3.3 below

¹¹ Koivurova 2008

¹² Greenland has not been a full member of the EU since 1985, whereas Svalbard is excepted from the agreement on the European Economic Area. For this reason, EU law on EIA and SEA is not discussed, though they are important benchmarks in most discussions on EA-systems.

¹³ Koivurova 2002, Koivurova and vanderZwag 2007

¹⁴ UNEP/IOC-UNESCO, Appendix on the AO

¹⁵ Young 2002, European Commission 2008

regulatory regime and there is no default regulatory mechanism to fill such gaps.¹⁶ The system also is sectorized with no requirements for integrated, ecosystem-based ocean management and an overall lack of coordination and cooperation. Modern regulatory tools such as the precautionary approach, integrated assessments and operational Environmental Assessments (EAs),¹⁷ have not been consistently incorporated into existing agreements or applied universally.¹⁸

In a special analysis for the AO, Koivurova and Molenaar (2009) point to several geographical and substantial gaps in the sectoral regulation of fisheries, shipping and offshore hydrocarbon activities. Further, global rules are sometimes not adapted to Arctic conditions. They also identify three major cross-sectoral gaps: Transboundary EA, marine protected areas and ecosystem-based ocean management.

Legal experts as well as political actors have proposed different versions of an Arctic treaty to address such shortcomings.¹⁹ The Arctic states on their side have pointed to the “law of the sea” as an extensive legal framework providing a solid foundation for responsible ocean management.²⁰ Within this framework, they call for suitable national and international regulations as a response to increased marine access and navigation.²¹

EA can be one such regulatory response. In the 1990s, the Arctic states saw environmental impact assessment (EIA) as an important tool. Legally non-binding Arctic guidelines were adopted in 1997. However, they were not incorporated into national legislation and seem to

¹⁶ OSPAR is an exception, ref 3.3.3

¹⁷ Chapter 2 explains terminology

¹⁸ Koivurova and Molenaar 2009, Rayfuse 2008

¹⁹ Some of the proposals referred in Koivurova (2008) are modeled on the Antarctic Treaty system. This seems politically unacceptable for the Arctic states, probably because of the implications for their sovereignty and the internationalized character of the Antarctic regime. Other alternatives build upon the LOSC and try to make a coherent regulatory framework for the AO.

²⁰ First expressed by the AO coastal states in the Ilulissat Declaration, later by all the Arctic states in the Tromsø declaration.

²¹ Tromsø declaration:4

have had almost no effect on the practice of the Arctic states.²² After many years without much attention, the topic was raised again in 2009, when a report to the ministers:

- “Urge that any future exploitation of natural resources in the Arctic must be based on [...] thorough impact assessments, to ensure safe and environmentally sound activities at all times.[...]”
- Consider the need for [...] a set of operational guidelines for assessing the impacts of projects, plans and programmes in the Arctic.”²³

1.3 Research questions, delimitations and sources

The objective of this thesis is to contribute to the discussion about how the use of EA can be enhanced as one concrete step in improving AO governance. Due to the large complexity in assessment approaches, chapter 2 first tries to establish a basic understanding of the instruments under discussion. Two research questions are then raised:

1. Which obligations exist for states under international law to conduct EA in the AO?
This is the major question. A selected review of relevant instruments is found in ch.3, while an analysis of the requirements in the AO is done in ch.4.
2. What are the gaps with respect to these obligations and major approaches for addressing them? This is discussed in chapter 5.

The Arctic Ocean as discussed here is the AO proper (fig 1.1). The delimitation particularly towards the North-East Atlantic can be unclear, but is not important for the discussion. It contains the maritime zones of five coastal states and two areas beyond national jurisdiction (ABNJ): a central area of the high seas and the deep seabed (“Area”). The “Area” may be reduced to separate pockets between the outer continental shelves when these are delimited.²⁴

²² Koivurova 2008:165-7

²³ SAO 2009:6

²⁴ Oude Elferink 2001, Potts and Schofield 2008



Fig 1.1. Maritime zones (200 nm) and the high seas in the AO. Dotted lines are the main maritime borders between states where delimitation still is disputed.

The discussion is delimited to the AO for several reasons. The marine Arctic is where probably some of the most radical changes will occur in the near future. It can be defined as a relatively clear geographical unit and has some distinct ecological features, first of all sea-ice. Further, the law of the sea is a relatively coherent regime with its own governance traditions. A marine focus also has the advantage of reducing some of the legal complexities caused by the shared responsibility for EAs between national and sub-national level in Canada, Russia and the US since the sub-national level has limited competence outside the nearest marine areas.²⁵ The discussion will be restricted to the application of EA to activities *within* the AO. This excludes transboundary assessments of activities situated *outside* the region, even when they have important impacts also on the AO (most notably discharges of greenhouse gasses

²⁵ Koivurova 2008:155, Bastmeijer and Koivurova:95-9

and contaminants that are transported into the Arctic²⁶). Only international law will be addressed, with no attempt to discuss the national systems of the Arctic states.

Legal literature and conventions are the main source for the discussion. A table in Appendix 1 summarizes the participation in the treaties examined. In order not to have an open-ended discussion, affiliation to AC is used as an indication of a state's interest in engaging in Arctic issues, possibly also in economic activities. These 17 states plus the European Community are referred to as "*Arctic relevant states*".

2 Environmental assessments (EAs) – an overview

In the 1960's, formal tools for prior assessment of complex situations started to develop particularly in planning. *Environmental impact assessment (EIA)* soon became one of the most influential approaches. This is partly due to its strong legislative basis, which began with the 1969 US National Environmental Policy Act (NEPA), framing EIA in a sustainability context some 15 years before the term was invented.²⁷ The parallel and subsequent evolution of related tools has led to a plethora of approaches and an often confusing terminology. The purpose of this chapter is to clarify the use of some basic concepts and explaining the key characteristics of EAs.

2.1 Some main types of EAs

Impact assessment (IA) is a generic term for many methods and processes that try to anticipate and evaluate impacts of future developments. One of the major traits to distinguish between them is the types of impacts that are in focus - or issues and values of main concern.

Environmental assessments (EA) focus at least on the biophysical environment. When the scope of impacts is defined in a specific way, it may be necessary to supplement with separate assessments for other impacts to get a more holistic view. Social and health (impact)

²⁶ Ref AC 2004 and AMAP 1998-2009

²⁷ Jay:288-9.

assessments now are well developed strands of assessments.²⁸ A trend in this direction of integration also is the development of sustainability assessments.²⁹ However, there is a strong tradition for using “environment” as a comprehensive term, integrating many sorts of impacts and risks into the same EA process.³⁰ Legislation and individual EAs therefore must be carefully examined to see how the term “environment” is used, or more generally, which impacts are incorporated.

Another distinction can be made according to which level of planning or decisions the assessment is linked to. Though NEPA contained general provisions about the need for assessments at all levels, developments both in the US and elsewhere first focused on EIA at the project level. This revealed several shortcomings. At the project level, the discussion is about how to develop. Possibilities for better solutions then can be severely restricted if decisions already have been made on the more fundamental questions whether, where and what to develop. If environmental considerations were not “up-streamed” into such strategic discussions, decisions could frame developments at the project-level in a way which could be malign to the environment. Further, individual projects are inappropriate for assessing cumulative impacts of many projects, or larger-scale effects. These were important motives for the development of *strategic environmental assessment (SEA)* of policies, plans and programmes³¹ as a separate tool in the 1990s, with its own legal base. It has often been suggested that policies, plans, programmes and projects are separate tiers that should be closely integrated so higher level assessments and decisions can frame those at the lower levels.³²

²⁸ Other specialized assessments include economic, ecologic, gender, cultural and trade assessments. See Glason:329-332, Hacking and Guthrie:73-74.

²⁹ There is a risk that environmental factors may be submerged in the EA documentation in IA, thereby making political trade-offs implicit in the assessment itself. See Craik:264 and Holder and McGillivray.

³⁰ An Australian example: “For the purpose of EIA, the meaning of environment incorporates physical, biological, cultural, economic and social factors”. Ref Sadler 1996:12, Glason et al 2005:7+18

³¹ There is no uniform international use of these terms. It has been proposed that “a policy may [...] be considered as the inspiration and guidance for action, a plan as a set of coordinated and timed objectives for the implementation of the policy, and a programme as a set of projects in a particular area” (see Lee and Holden:599)

³² “Tiering” See Fischer:ch.3

A development may have extraterritorial impacts beyond the state where it is located. Assessing impacts abroad requires knowledge about the receiving environment and extensive collaboration across the borders. To ensure affected states a right to be involved in a satisfactory manner,³³ special instruments for *transboundary EA* (TEA) have been elaborated, mostly at project-level (TEIA). TEA is a domestic process leading to a decision in the state of origin, but conducted in collaboration with affected states and sometimes non-state parties. TEAs can also account for impacts on global commons.

2.2 Some roles of EA

EAs are structured processes that try to anticipate environmental consequences in advance of decisions (ex ante prediction). When this is combined with considering alternatives and using the information on impacts for reformulating development options, EA can be a valuable tool not only to prevent harm, but also to optimize benefits. There have been different attitudes towards where the EA process ends and different follow-up processes begin. Now there is an increased emphasis on extending assessment activities and remediation of harm to the whole life-cycle. Monitoring and auditing (ex post evaluation), which are central parts of environmental management systems, are therefore often included in the EA process itself. Still, monitoring and ex post evaluation are said to be “among the least developed stages in many assessment systems.”³⁴

EA is a support tool for informing decision-makers. In many jurisdictions it is a separate process that must feed into other processes leading to substantive decisions. The decision concluding the EA process will then be limited to whether the quality is good enough, for example if the terms of reference are met. EA can also be integrated into for example planning or other sectoral legislation. In such cases the final decision is whether or not a proposal shall get a consent and on which conditions. The EA will seldom be the only basis for decisions, which may include other written documentation or contacts and even negotiat-

³³ Craik:48-51

³⁴ Lee 2006:65. See also Glason et al 2005:185-205, Holden and Lee 2007:604-7 and Morrison-Saunders and Arts.

ions between decision-makers, proponents, public authorities³⁵ and involved parties. Even though decision-makers may be legally required to review the EA results, there is usually no obligation on them to give specified weight to the environmental information or to restrain the outcome of their decisions³⁶. EA therefore first of all is a procedural legal requirement that shall ensure an informed choice when balancing environmental concerns against other interests like economic benefits; EA laws can prohibit an uninformed, but not an unwise decision³⁷. This is strikingly different from substantive and prescriptive measures setting standards for the environment. EA therefore has been characterized as a regulatory technique encouraging internal self-reflection among the regulated about their environmental performance.³⁸

Early technical-rational models tended to see EIA as a task for impartial experts and subsequent decision-making as objective selection of the optimal solution.³⁹ But EA is not only about facts, whether established by science or other strands of knowledge. In most steps, it inevitably implies value-based choices, for example in deciding which alternatives and impacts to consider. Such choices can be crucial for its conclusions and vital for the interests of those affected by decisions. This brings EA into a normative realm where expert judgments must be balanced with public opinions and values. It is now widely recognized that participation of the public and competent authorities can ensure better quality of the assessment, increase effectiveness by preventing conflicts and provide openness and better confidence in the EA system and its decisions. EA-legislation may give the public the right to be informed, to express an opinion and even to challenge decisions in courts. However, it is variable how such rights are recognized, when in the process participation is required and which forms it takes.⁴⁰

³⁵ EIAs can be undertaken by governmental agencies, but the proponent of a project also has this role in many jurisdictions. SEAs mostly are elaborated by public authorities.

³⁶ Jay:291-3. The EU Habitats Directive is one exception where an EA concluding with negative environmental effects implies a substantive limitation on the discretion in later decisions. The EU Commission has also explored the possibility of obliging a refusal of consent for projects with detrimental effects, as in Portugal (Holden and Lee:595-6)

³⁷ US supreme court about federal EIA legislation. See Craik:8.

³⁸ Holden and Lee:548-55,

³⁹ Jay:288, Holden and Lee:570, Craik:38.

⁴⁰ Glason:157-68 , Holden and Lee:40-7 and 583-7, Attapatu :353-77

2.3 The process and content of EA

NEPA was not elaborate on how to achieve its objectives apart from requiring a “detailed statement” on environmental impacts. From that, the US system was shaped through additional legislation, court decisions and practice. It inspired other states, and a rich tradition has grown out of national systems. When UNEP in 1987 adopted “Goals and Principles of EIA”, this was the first more elaborate instrument internationally.⁴¹ The guidelines are transnational; they apply both to domestic and transboundary EIA. In a concise and generic form they summarize what has become the basic understanding of EIA. This includes (fig 1.2):

Screening: The determination of whether an activity is likely to significantly affect the environment, concluding with a decision of whether an EIA is necessary or not, eventually also how comprehensive it shall be. Many legal test methods are mentioned in the guidelines, including listing of proxy variables reflecting “significance” and case-by-case examination supported by criteria.

Scoping: The determination of the content of the assessment, most notably the selection of alternatives, impacts and methods to be considered.

Assessment of impacts and reporting: The report should contain a description of the proposed activity and alternatives to that, baseline description of the environment and the likely impacts upon it from the alternatives, mitigation measures, knowledge gaps and uncertainties and a non-technical summary.

Review and public participation: An impartial examination of the information should be undertaken prior to the decision. Appropriate opportunity should be made for government agencies, the public, experts and interest groups to comment.

Final decision: Decisions on undertaking or authorizing a potentially harmful activity should not be taken before the EIA allows the effects to be fully taken into account. The decision

⁴¹ UNEP 1987

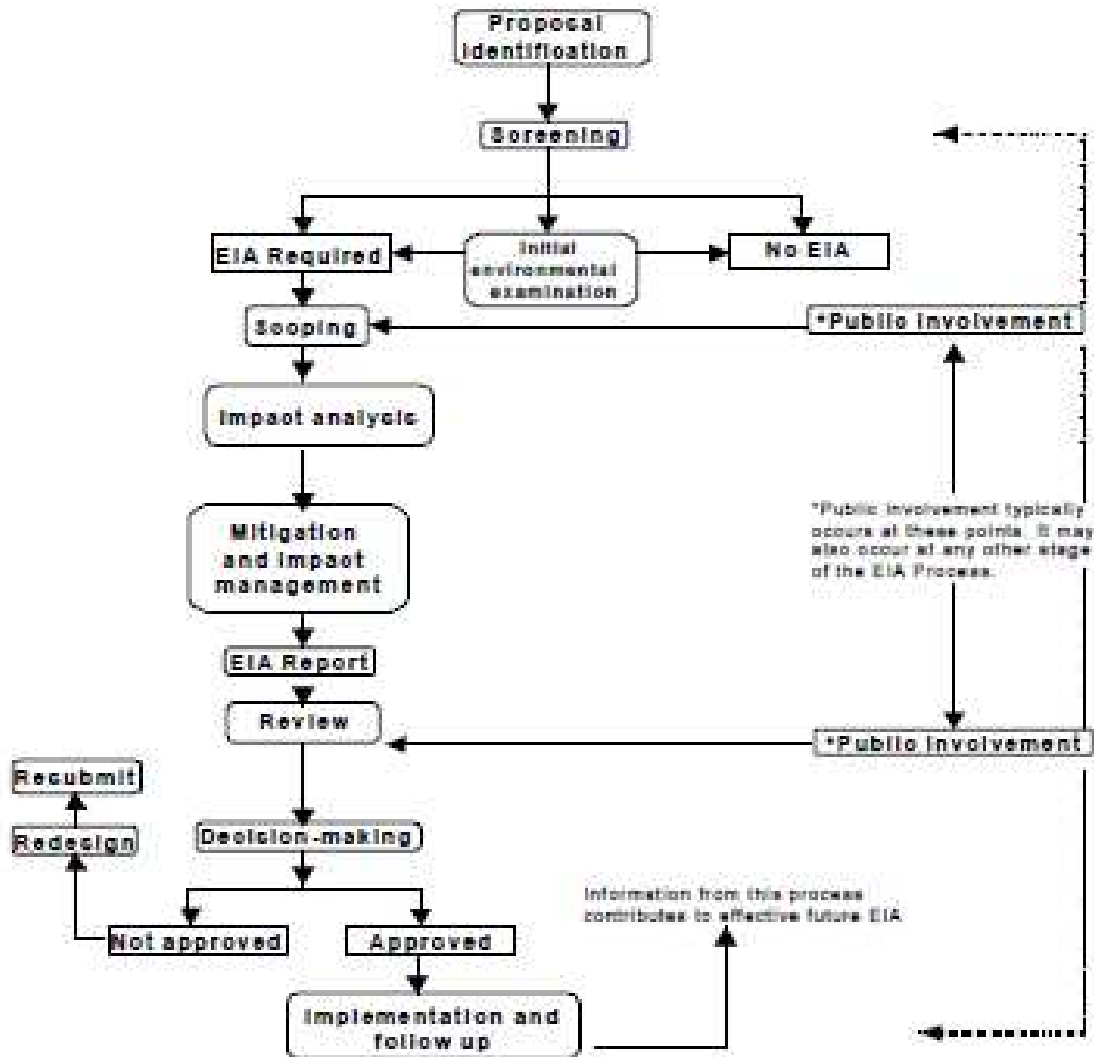


Fig 1.2: The general process of EIA (UNEP 2002).

should be in writing and explain why and how it eventually tries to prevent, reduce or mitigate damage to the environment. It should be made available to interested groups.

Follow-up: The activity and its effects on the environment should be supervised appropriately also after the decision

Particular transboundary provisions include an encouragement to states to conclude reciprocal arrangements that allow notification, exchange of information and consultation, and to do so

if the EIA indicates that other states or ABNJ are likely to be significantly affected. As the next chapter will demonstrate, this has been further elaborated in several instruments.

SEA will in many cases be adjusted to the same process as EIA. The more abstract level of assessment and longer chains of effects however make special methods necessary. A number of SEA and SEA-related tools exist.⁴²

2.4 Does EA make a difference?

Several attempts have been made to evaluate the effectiveness of EA, particularly EIA: Does it really matter? The answer depends on the perspective.

A main reason for introducing EA was to avoid marginalization of the environment among public agencies, private actors and political decision-makers.⁴³ With the wide application of the instrument, this has changed. Environmental data are sampled, assessments are made and brought to the attention of a number of different decision-makers. Though the quality can be improved, the environment has been mainstreamed.

But does that influence the substantive outcome of decisions, frequently stated as its purpose in legislation, guidance and academic writing? Jay et al (2007) quote several studies concluding that the contributions of EIA on both consent decisions and project design is moderate.⁴⁴ Others have noted the limited success in avoiding environmental harm.⁴⁵ This should not be surprising given the advisory role of EAs. Decision-makers have ample discretion to favour other interests. The results therefore can be seen as an evaluation of the weight decision-makers give to the environment, not of the EIA process itself. It also illustrates the tension between substance and process in EIA.⁴⁶ One line of reform proposed has been to link EA closer to substantial requirements.⁴⁷

⁴² Dalal-Clayton and Sadler:ch.2, Fischer:ch.2

⁴³ Craik:11

⁴⁴ Though not stated, there are probably few marine and transboundary assessments included.

⁴⁵ Holden and Lee:593

⁴⁶ Ref. Craik

⁴⁷ Jay:294-7, Sadler: ch7, ref also footnote 36.

However, a wider cultural and organizational perspective gives other types of answers. Requiring environmental information to be collected and considered is found to increase environmental awareness and learning.⁴⁸ This can create more subtle changes like new understandings of environmental issues, changes in values and norms and in organizational structures and routines. The processes for public participation are crucial in such an understanding of the value of EA as it opens up a field for debate and collective reflection. In the longer run, this can create the support needed for addressing severe environmental problems and have a gradual, transformative effect on decision-making.⁴⁹

3 EA obligations with Arctic relevance in international law

EA is contained in all sources of international law, most notably conventions, customary law and general principles of law.⁵⁰ It has also been addressed in judicial decisions, academic teachings, political declarations, international guidelines and other soft-law instruments.⁵¹ Together, this mosaic forms the international law on EA.

Two dimensions are considered when examining the sources. First, the distinction between hard law and soft law is necessary for establishing to which degree there are legally binding obligations. Conventions, customary law, legally binding acts of inter-governmental organizations and to a certain degree general principles of law are all hard-law sources. Guidelines are important for EA and are referred to as non-binding, even in cases when they are endorsed by competent bodies of conventions.⁵² Second, the instruments vary according to how specific they are. Many instruments are rather general but can still establish basic obligations for undertaking EAs in particular circumstances. The complexity increases when we also want to find out what such an obligations implies; what is prescribed about procedures and content?

⁴⁸ Sadler 1996:iii.

⁴⁹ Holder and Lee:558-9, 570, Craik:13-17, 227-9, Mitchell et al.

⁵⁰ ICJ 1945, art 38(1).

⁵¹ Birnie, Boyle and Redgwell 2009 (hereafter referred to as BBR):15.

⁵² Craik:105-8. The 1969 Vienna convention art 31(3)(a) still indicate that guidelines endorsed this way have relevance for the interpretation of a treaty.

The most specific instruments have explicit provisions on EIA or SEA, a few of them are even highly elaborated. A lower level of specificity is where we find requirements of an “assessment” or similar. EIA and SEA may often be the most relevant answer to this, but other approaches can not be excluded. Finally, there is what can be called implicit or indirect EA requirements. Assessment or similar is not even referred to; nevertheless, it is not possible for the parties to fulfill their obligations without some sort of prior examination. Again, EIA or SEA may be relevant approaches. All the AO-relevant treaties with explicit provisions on EA should be included in the discussion below. For the less precise instruments, it is impossible to be comprehensive.

3.1 Domestic and transboundary EAs

When the whole AO across borders and jurisdictions is the theme for discussion, it is natural to look at EA as a transnational instrument.⁵³ There are good reasons for treating EA as such. It has evolved in a close interplay between domestic and international regimes and practices. At the national level, the same legislation regulates both domestic EA and TEA.⁵⁴ Apart from the regulation of transboundary procedures, domestic and transnational EAs share the same basic structure and characteristics. In a legal context it is nevertheless necessary to distinguish between domestic EA and TEA; as will be shown, their legal status differs in a way which can influence the obligations of states.

Whether an assessment will be domestic or transboundary is on the first hand decided by which state has the responsibility for undertaking it. This requires a little more reflection in the oceans than on land since nationals from any state have *rights* to certain activities even in areas within national jurisdiction (AWNJ).⁵⁵ With the possible exception of shipping,⁵⁶ the

⁵³ Transnational means that it has a general character transcending borders and the traditional state-private divide. See Craik:10.

⁵⁴ Craik emphasizes how this mechanism makes it possible for international EA instruments to be used outside its primary area of application, also the non-binding ones.

⁵⁵ This includes navigation for ships and laying of cables and pipelines (LOSC art 17, 58, 79).

⁵⁶ Flag state responsibility for assessment according to art 206 may create a duty to assess shipping activities also in the EEZ of a coastal state. That will in case be a TEA.

coastal states however have the responsibility for EAs in their own maritime zones.⁵⁷ If the activity is located in the high seas, it is the duty of the flag state. In the deep seabed, the International Seabed Authority (ISA) has the main responsibility. The next issue to consider is whether the impacts of the activity will affect other states' land or marine areas, or ABNJ. A domestic EA occur only for the situation where an activity in the maritime zone of an AO coastal state affects only the same state's territory. If the effects reach beyond the borders, the coastal state must conduct a TEA. If the activity is located in international spaces, it will always be a TEA.⁵⁸

This can leave the impression that TEA will predominate in the AO. It may be objected that the maritime zones of the AO coastal states are large and that major developments mostly will take place within them until the high seas becomes more accessible. On the other hand, it is not so evident to anticipate how far effects of future activities will reach. Ocean currents and migrating fish, birds and mammals may lead to effects frequently propagating into other zones.

3.2 General principles supporting EA

Several principles of international environmental law are relevant for understanding the role and structure of EA. The most fundamental one is probably the duty to prevent, reduce and control environmental harm known as the *harm principle*.⁵⁹ Its origins can be traced back to the 1939 *Trail Smelter* case. The expanded and modern version embodied in the 1972 Stockholm declaration has been called "the foundation of modern international environmental law"⁶⁰ and is now a rule of customary international law.⁶¹ In principle 2 of the 1992 Rio declaration, it is stated:

⁵⁷ Follows from the right to exploit the resources and set conditions for that in LOSC art 2, 56(1) and 77. Ref. also art 60, 79(4), 80 and 81.

⁵⁸ Ref table 3.1

⁵⁹ BBR:137-52, Atapattu:273-7 and 290-300, Craik:59-68.

⁶⁰ Arapattu:4, Bastmeijer and Koivurova:3

⁶¹ BBR:143

“States have [...] the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond national jurisdiction”

The principle implies an obligation on states to act with due diligence by introducing policies and legislation that prevent or reduce the risk of significant transboundary harm.⁶² Such instruments must have the ability to anticipate and evaluate harm at an early stage. Though this has been called an obligation of conduct, not result, it is still important to note that it is linked to a substantive requirement of avoiding harm.⁶³ The duty of due diligence also entails an evolving standard of regulations, often expressed as “best practical means” or “best environmental practices”.⁶⁴

States have a well established *duty to cooperate*, also in environmental matters. This is expressed in its most general sense as a global partnership for the Earth’s ecosystems in Rio principle seven. More specific obligations are found in principle 19:⁶⁵

“States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith”

The principles of harm and cooperation give the fundamental rationale for TEA.⁶⁶ Transboundary conduct can also be deduced from the *principle of non-discrimination*. It requires states to treat internal and external harm equally without discrimination when applying laws, standards and procedures. Associated to this is the *principle of equal access*. It is aimed at providing the public in neighbouring states equal opportunity as nationals to

⁶² Though Rio principle 2 is unqualified on the severity of impacts, the *Trail Smelter* case limited the consideration to “serious” consequences. “Significant” is now the preferred term, see Craik:60-2

⁶³ Craik:62

⁶⁴ BBR:147-9

⁶⁵ BBR:138

⁶⁶ Craik:120

information and to act before administrative authorities and courts. These principles do not oblige a certain level of performance. Where a country's environmental laws are weak, the same weak rules apply to transboundary harm and foreign parties.⁶⁷ Non-discrimination is not mentioned in the Rio Declaration. Given its consistent endorsement by the International Court of Justice (ICJ), it can probably be assumed that it already reflects international law.⁶⁸

The harm principle is widely taken as an indirect rationale also for domestic EA; without a general system of prior assessment that screens all developments for eventual transboundary effects, a state can hardly be seen as acting with due diligence.⁶⁹ Domestic commitments are also supported by the internationalization of the environment contained in sustainable development; states now have wider duties to protect environmental values that used to be seen as their internal affairs, at least in issues of "common concern".⁷⁰ EIA itself however has gradually evolved as a principle in international law. Early roots can be found in the 1972 Stockholm Declaration,⁷¹ while explicit reference to EIA appeared for the first time in the 1982 World Charter for Nature. During the 1980s, the instrument rapidly gained acceptance in a growing number of countries, international organizations and conventions.⁷² In Rio principle 17, *the principle of EIA* thus is expressed in unqualified and wide terms:

"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 increased emphasis on the role of the public in EA is rooted in an emerging consensus that public participation is crucial in environmental decision making. Rio principle 10 calls for states to encourage public participation of "all concerned citizens [...] by making

⁶⁷ BBR:152 and 304-11, Craik:55-9

⁶⁸ BBR:305

⁶⁹ Some authors like Atapattu:273-7 argue that there is a separate principle of prevention, independent of the internationalized harm-principle, from which domestic EA can be deduced more directly. Ref also Koivurova 2002:189.

⁷⁰ Atapattu:7, BBR:128-30

⁷¹ Principle 13 and 14

⁷² Connelly, Ebbesson, Atapattu:297-308

information widely available. Effective access to judicial and administrative proceedings [...] shall be provided.”

The *precautionary approach or principle* can be found in Rio principle 15 and numerous other instruments. While its implications for the precautionary conduct of decision-makers have been widely debated,⁷³ the legal consequences for EAs may seem more straight-forward. In order to make a judgement about the need for precautionary measures, the EA must provide information about the degree of “scientific certainty” in predictions. An explicit and proper treatment of uncertainty in EAs therefore is not only an issue of best practice; it is also a legal commitment.

Finally, *the principle of integration* should be mentioned. Principle 4 of the Rio declaration states that “environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it”. This has been particularly used as a mandate for SEA.⁷⁴

The principles briefly introduced give basic directions for international and domestic EA obligations. Each of them has its advantages and disadvantages. For example, the principles of non-discrimination and equal access focus on impacted individuals as opposed to states in the harm principle. But only the harm principle can be the basis for reciprocal obligations between states.⁷⁵ The principles are starting points for further codification in law and can be combined in the same instrument. That will give them a more binding form and make them operational through more elaborated procedures. It is for example not enough to establish a duty to exchange information; issues like what information should be exchanged, when and to whom must be clarified.

⁷³ See for example BBR:159-64

⁷⁴ Craik:156

⁷⁵ Craik:82

3.3 EA provisions in international treaties

3.3.1 Specialized EA instruments

Provisions on EA are mostly integrated into treaties that are part of particular regimes. The 1991 *Convention on Environmental Impact Assessment in a Transboundary Context* (Espoo-convention) is the only convention in international law with EA as the primary purpose.⁷⁶ It has set the standards for numerous other instruments and will therefore be described more in detail. In the Arctic context, *The Arctic EIA guidelines* have the same specialized focus.

The 1991 Espoo Convention⁷⁷

The Convention is part of a broader UNECE regime on prevention of transnational harm.⁷⁸ Accordingly, its objective is to “prevent, reduce and control significant adverse transboundary environmental impact from proposed activities”.⁷⁹ States must establish a national EIA system for implementation.⁸⁰ In this way minimum requirements also for domestic EIA are defined. The transboundary situation it accounts for is the classical between the territories of state parties:⁸¹ impacts “exclusively of a global nature” are not included.⁸² The scope thus is narrower than in the harm principle and excludes ABNJ both as affected areas and origin of harm.

The treaty is signed by all the relevant Arctic states that can become members.⁸³ Though Iceland, Russia and USA have not become parties, these countries at least have the obligation to “refrain from acts which would defeat the object and purpose of the treaty”.⁸⁴

⁷⁶ Craik:102

⁷⁷ Koivurova 2002:ch.V, Schrage 2008.

⁷⁸ UN Economic Commission for Europe has five conventions on air pollution, EIA, industrial accidents, transboundary waters and public participation.

⁷⁹ art 2(1)

⁸⁰ Art 2(2).

⁸¹ States do not have to be adjacent. Due to the delimitation of the discussion here to developments in the AO itself, it is only considered between the AO coastal states.

⁸² Art 1(viii)

⁸³ An amendment still not in force, opens up for all UN member states to accede the convention. This will eventually make it a global EIA-treaty.

The impacts to be evaluated are environmental, meaning first of all changes in biophysical factors and human health. Only indirect effects on socio-economic conditions and cultural heritage shall be included when caused by initial biophysical impacts.⁸⁵ The major procedural steps can be summarized (ref fig 1.2):

Screening: The first criterion for initiating a TEIA is that a project must be covered by the list of activities in annex I. This mostly contains activities on land. Some marine-related exist, like trading ports, offshore hydrocarbon production, oil and gas pipelines and storage facilities for petroleum. Activities are only subject to TEIA if it is likely that significant adverse impacts can occur in other states.⁸⁶ If the parties cannot agree whether there transboundary impacts may occur, they can use an independent inquiry commission.⁸⁷ Activities not listed may also be subjected to a TEIA if the states agree. General criteria to assist in determining whether impacts are “significant” are provided for such discussions.⁸⁸

Scoping: There are no explicit references to scoping or decisions about the content of the EIA-study, like its terms-of-reference. This is up to the domestic EIA system. States that have national scoping will however meet the obligation of early notification more easily than those without.⁸⁹

Environmental Impact Report: The minimum content⁹⁰ is very similar to the UNEP principles. Both require the development of alternatives only when “appropriate”. If alternatives are required in national legislation, it should also be included in a TEIA⁹¹, though

⁸⁴ Vienna convention article 18

⁸⁵ Art 1(vii)

⁸⁶ Art 2(2). This double criterion is a different use of listings than in the EU EIA directive, which requires listed activities always to be assessed.

⁸⁷ Art 3(7)

⁸⁸ Inclusion of other activities can be agreed on a case-by-case basis (art 2(5) and Appendix III), or be established in an agreement by an additional project list or an additional criteria-set (art 2(9) and art 8)

⁸⁹ Schrage:39

⁹⁰ Appendix II

⁹¹ Craik:139

other considerations also can make reasonable alternatives required. Unlike the UNEP principles, indirect, cumulative and long-term impacts are not specified as necessary.

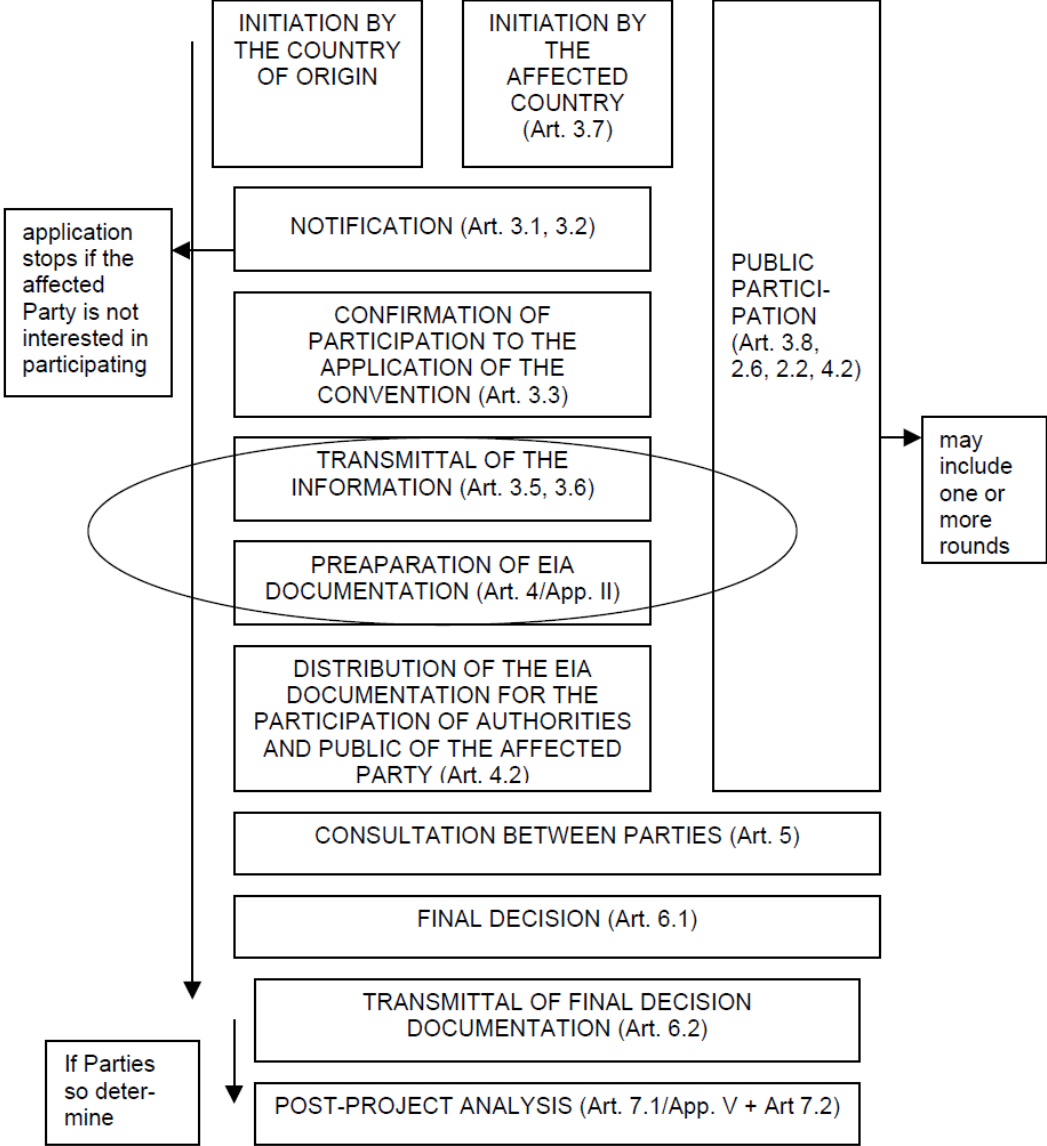


Fig 3.1 Main procedural steps in the Espoo Convention (ECE 2006)

Transboundary collaboration and public participation: The Espoo Convention establishes procedures to meet the general obligations of notification and consultation, placing the responsibility first of all on states.⁹² This is envisaged to be done in interplay with non-state

⁹² Art 3-7

actors. The public in the affected state shall be involved in the EIA procedure itself, both in the preparatory phase and the review of the EIS.⁹³

Final decision: States shall enter into consultation before a final decision.⁹⁴ The state of origin shall take due account to the outcome of the EIA and comments received. Afterwards, the affected state(-s) shall be informed about the final decision “along with reasons and considerations on which it was based”.⁹⁵

Follow-up: The parties shall determine whether a post-project analysis shall be carried out. In cases where they agree to do, monitoring to identify adverse transboundary effects is recommended. A positive finding shall lead to consultations on measures to reduce or eliminate the impact.⁹⁶

It is relevant for the situation in the Arctic that the Espoo convention encourages bi- and multilateral agreements between states that may include more stringent measures or means of implementation.⁹⁷

The 2003 Kiev Protocol on SEA (SEA protocol)

Parties to the Espoo-convention shall “endeavor to apply the principles of EIA to policies, plans and programs”.⁹⁸ With the SEA protocol, a legally binding instrument emerged with a content that is more appropriate for this level of assessment. It applies “without prejudice”⁹⁹ to both the Espoo and the Aarhus conventions.¹⁰⁰ Since there are no provisions about its geographical coverage, one implication is that it also excludes ABNJ. Norway is the only Arctic coastal state that has become a party, whereas Denmark has signed it. It has not entered into force yet.

⁹³ Art 2(6), 3(8) and 4(2)

⁹⁴ Art 5

⁹⁵ Art 6

⁹⁶ Art 7

⁹⁷ Art 2(9) and 8. Ref 5.2.2 below

⁹⁸ Art 2(7)

⁹⁹ Preamble and art 15

¹⁰⁰ The 1998 UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters

SEA is mandatory for certain draft plans and programs and is recommended for policies and legislation.¹⁰¹ A major difference compared to the Espoo convention is that the protocol is mainly about national SEA systems, with additional considerations of transboundary procedures.¹⁰² In transboundary cases, the principle of non-discrimination is clearly stated “for the relevant provisions” on public participation.¹⁰³ Another difference is that the interests to consider have been narrowed with socio-economic impacts being completely excluded.¹⁰⁴

The field of application is complex, reflecting the higher level of assessment and many criteria (fig 3.2). SEA shall be carried out for sectoral plans and programs within i.a. fisheries, industry including mining, transport, water management and tourism. This applies only when the plans and programs “set the framework for future development consents” of projects listed in the Espoo convention. Similarly, SEA must be undertaken if the plans and programs set the framework for a list of projects that require EIA according to national legislation.

Scoping shall be included in SEA-arrangements. However, public participation in this phase is optional, and no publication of a scoping report is required. The provisions for public participation in general are inspired by the Aarhus convention and give environmental and health authorities a clearly defined role.¹⁰⁵ The other steps in the procedure resemble the Espoo convention.

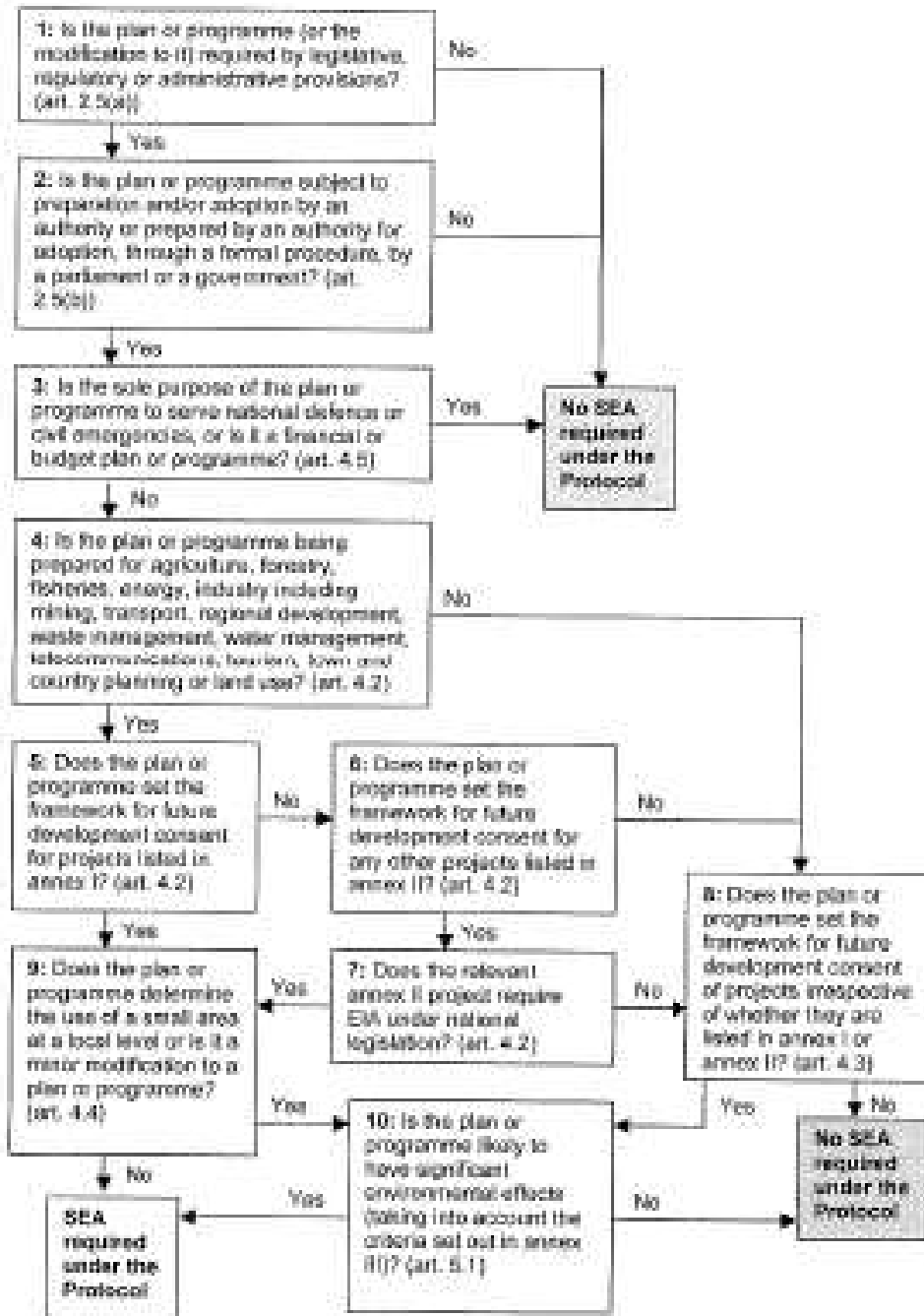
¹⁰¹ Preamble, art.4 and 13

¹⁰² Art 10.

¹⁰³ Art 3(7)

¹⁰⁴ Art 2(7)

¹⁰⁵ Compare for example art 3 and 8 with the Aarhus convention.



Source: Reproduced from UNECE/IEC (2007a, p55)

Fig 3.2: The screening process in the SEA protocol

The 1997 Guidelines for EIA in the Arctic¹⁰⁶

The development of the Arctic EIA guidelines must be seen against a background of several commitments from the Arctic states. Already in 1991, the Arctic states declared that “management, planning and development activities which may significantly affect the Arctic ecosystems shall [...] be based on informed assessments of their possible impacts on the Arctic environment, including cumulative impacts”.¹⁰⁷ After the adoption of the Espoo convention, there were high expectations that all the Arctic states would ratify it soon, and the prospects of getting a pan-Arctic EIA convention were among the inspirations for their development. Their free-standing status under a soft-law collaboration makes them different from other guidelines elaborating on treaty provisions and clearly non-binding.

A central aim of the guidelines was to raise issues that are unique to Arctic assessments. Arctic-specific thresholds and significance criteria are for example recommended. Another example is the approaches meant to overcome the obstacles of engaging the public in sparsely populated areas with indigenous populations. The transboundary practices recommended in ch 11 go a little beyond the Espoo convention on issues like joint study or steering groups and an inclusive approach to participation, particularly towards indigenous groups.

The guidelines should be “applicable across different jurisdictional boundaries and in different EIA processes” by “providing suggestions and examples of good practice to enhance the quality of the EIAs and the harmonization of EIA in different parts of the Arctic”. It is thus interesting to note that they elaborate on all steps in the EIA procedure, apart from decision making. This underlines the Arctic state’s acceptance of a basic uniform structure of the EIA process.¹⁰⁸ The guidelines are among the most elaborated international instruments, reflecting the more demanding domestic EIA requirements in the Arctic region.¹⁰⁹ Still there are shortcomings relevant for the AO like the only brief introduction of SEA and the lacking attention to international spaces.

¹⁰⁶ See Koivurova 2008.

¹⁰⁷ Koivurova 2008:153

¹⁰⁸ Craik p107

¹⁰⁹ Ibid p162

3.3.2 The 1992 UN Convention on the Law of the Sea (LOSC)

The LOSC's basic objective is to establish a "legal order of the seas and oceans" that i.a. shall ensure both utilization and conservation of their resources.¹¹⁰ It was an important milestone when the treaty established that "states have the obligation to protect and preserve the marine environment".¹¹¹ This is the context for article 206 on "assessment of potential effects of activities." The article has a very broad scope by referring to "planned activities" in general terms, opening up for both strategic and project-oriented development in all sectors. Similarly it does not qualify the obligation according to maritime zones, like LOSC often does; it establishes a general obligation that applies everywhere, also for activities beyond a state's own maritime zones which are under its jurisdiction, like vessels. All relevant Arctic states, except the US, are parties to the LOSC and bound by this transnational obligation.

The duty to assess applies when there are "reasonable grounds" to believe that significant harm will occur. The requirement of reasonableness does not eliminate the obligation to conduct an assessment; instead, it "maintains an objective standard for the determination of the threshold", similar to the test of significance in screening.¹¹² When this threshold is met, states shall carry out the assessment "as far as practicable". This most likely refers to the differentiated responsibilities of states often found in LOSC and gives states leeway in determining the level of detail and depth in the assessment.¹¹³ Additional leeway is given by the duty to "assess" instead of making an EIA.¹¹⁴ Two elements of an EIA still can be recognized; "planned" activities establishes that it is prior assessment, whereas the reference to article 205 provides an important minimum requirement for participation of "all States". Such unelaborated EIA commitments were a common practice in environmental treaties before the Rio Conference.¹¹⁵ The framework-character of LOSC however gives states and international organizations a wide mandate to negotiate more detailed obligations.

¹¹⁰ Preamble

¹¹¹ Article 192, further developed in art 193 and 194 as general provisions for part XII.

¹¹² Craik at 98-9

¹¹³ Ref the common and differentiated responsibility principle (Atapattu ch 5), later expressed in Rio principle 7

¹¹⁴ According to Craik:98, a draft of this article from Norway proposed to file an "environmental impact statement". This term is used in the most central EIA-obligation of the US NEPA, an important inspiration for EIA at the time of the negotiations. A more special meaning thus may have been considered, but rejected, ref. section 4.2.2.

¹¹⁵ Ibid at 99

3.3.3 The 1992 OSPAR Convention

The OSPAR Convention implements and elaborates on LOSC for the particular purpose of protecting the marine environment of the North-East Atlantic against adverse effects of human activities.¹¹⁶ This includes a sector of the Arctic Ocean stretching to the North Pole. All eligible Arctic states apart from Russia are parties.¹¹⁷

Unlike most regional seas conventions, OSPAR contains no explicit EA provisions.¹¹⁸ The treaty text has an indirect requirement of TEIA or a similar procedure when pollution from one party “is likely to prejudice the interests” of other parties. The only procedure prescribed is that the parties shall try to negotiate an agreement, eventually with assistance of the OSPAR Commission.¹¹⁹ In the annexes there are other implicit EIA provisions. One concerns derogations from the general ban of dumping of petroleum installations.¹²⁰ Assessments also are needed in support of decisions on necessary measures to safeguard against harm to marine ecosystems and biodiversity. Such measures shall include the CBD obligations of developing “strategies, plans and programmes”, but no reference is made to the SEA provision in CBD.¹²¹ OSPAR also has provisions and considerable activities on other EA-related instruments. The parties shall assess the quality status of the marine environment, supported by collaborative monitoring and assessment-relevant research.¹²² Assessments shall include evaluations of the effectiveness of measures taken “and planned”, eventually supported by compliance monitoring.¹²³

¹¹⁶ This general mandate and art 7 allows OSPAR to act as a default authority for new unregulated activities as long as it does not conflict with other conventions and international organisations. NEAFC, IMO and ISA are particularly relevant in this regard.

¹¹⁷ Canada and US cannot become members (art 25), but can be invited as observers (art 11). Article 27(2) opens the possibility of inviting new members, with a corresponding adjustment of the maritime area covered by the convention.

¹¹⁸ Ref Appendix 1 in Craik.

¹¹⁹ Art. 21(1) and (2)

¹²⁰ Annex III art 5(2)

¹²¹ Annex V art 2, ref also CBD art 6 and 14(1)(b)

¹²² Art. 6 and Annex IV. Quality Status Reports were first published in 2000 and are now under preparation for 2010.

¹²³ Art. 6(b), annex I art. 2

3.3.4 Biodiversity-related conventions

The 1992 Convention on Biological Diversity (CBD)

“The conservation of biological diversity is a common concern of humankind”¹²⁴ and as such one of the important limitations on states’ environmental self-determination. A primary concern of the CBD is to ensure that biodiversity is taken into account in states EA systems, not to elaborate details in procedures.¹²⁵ The jurisdictional scope comprises both AWNJ and ABNJ.¹²⁶

Following article 14 on “impact assessment”, parties shall introduce appropriate procedures for EIA of plans and SEA of programmes and policies that are likely to have a significant adverse effect on biodiversity. Most commentaries to this article emphasize its highly qualified nature and the lack of requirements for assessment content and procedures.¹²⁷ The underlying assumption however is that “the actual modalities of conducting the EIA will be addressed in domestic legislation and through bilateral, regional and multilateral instruments”.¹²⁸ As long as a state has an existing EA system and a demonstrated capacity to conduct EAs, the obligation to incorporate biodiversity concerns is strengthened.¹²⁹ All the Arctic coastal states have demonstrated this capacity. Biodiversity issues therefore should be expected to be accounted for in their EA systems. The exception is the US that has not ratified CBD.

¹²⁴ CBD preamble

¹²⁵ Boyle:41, Craik:100

¹²⁶ Art. 4, see also art .14(1)c

¹²⁷ Boyle:40, Koivurova (2002):220, BBR:167 and 617. The latter notes that we must “look more into the implementation process than the textual analysis of the Convention’s provisions in order to measure its contribution to conservation of biodiversity”

¹²⁸ Craik:100

¹²⁹ Ibid. According to <http://www.cbd.int/impact/problem/>, almost all parties have legislation on EIA, about half of them on SEA. Only one and three parties, respectively, have reported not having an EIA and SEA policy. The high number of reporting to the convention on art 14 is an indication that most states find it “possible” and “appropriate” to include biodiversity issues in their EA systems. The CBD-website also reports that many states have strengthened their EA legislation and practice when implementing art 14. (accessed 8 May 2009)

Voluntary guidelines have been made for how states and international organizations can incorporate biodiversity concerns into their EA instruments and procedures.¹³⁰ The EIA guidelines follow the internationally accepted procedural steps with a particular attention on screening and scoping. The SEA guidelines are more open towards different approaches. The guidelines also emphasize that biodiversity is relevant for all types of impact assessments in order to capture the many functions of biodiversity.¹³¹

An open-ended working group established in 2008 under CBD shall consider how states can assess biodiversity impacts in ABNJ.¹³² Its mandate includes developing scientific and technical guidance for the implementation of EIA and SEA. The absence of operational procedures for assessing biodiversity in ABNJ has also been identified as a regulatory gap by a working group under the UN General Assembly (UNGA) and may become a theme in its further work.¹³³

Conventions on conservation of nature

Several conservation conventions have indirect requirements for EAs or related instruments. The 1979 *Convention on the Conservation of Migratory Species of Wild Animals* (CMS) is particularly relevant in the AO where a number of fish, mammals and birds use the area only in summer. It can apply to the whole geographical range of a species¹³⁴, but its importance in the AO is reduced since only Denmark and Norway are the only full parties.¹³⁵ The parties have emphasized “the importance of good quality EIA and SEA” as tools for implementing several articles that imply a need to anticipate and predict effects.¹³⁶ The 1971 *Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat* applies

¹³⁰ COP 8 Decision VIII/28 with guidelines in annexes. It is underlined that the guidelines are “not technical manuals on how to conduct a biodiversity-inclusive assessment study” (page 6)

¹³¹ The EIA guidelines mention social impact assessments, health assessments and trade assessments.

¹³² CoP 9, decision IX/20

¹³³ Koivurova and Molenaar:39-40.

¹³⁴ Art 1(f) and (h)

¹³⁵ See appendix 1 for details

¹³⁶ Resolution 7.2 adopted at COP 7, Bonn 2002. The articles identified where EA is relevant are II(2) on avoiding species becoming endangered, article III(4) on protection of appendix I species, IV(3) and (4) on AGREEMENTS concerning appendix II and other species and the interpretation of conservation status according to art I(1)c.

to wetlands in the coastal areas of the Arctic coastal states, which are all parties to it¹³⁷. The Ramsar-parties have agreed to “ensure that any projects, plans, programmes and policies with the potential to alter the ecological character of wetlands on the Ramsar list or impact negatively on other wetlands in their territory, are subjected to rigorous impact assessment procedures and to formalize such procedures [...]”¹³⁸ The parties to these conventions took part in the elaboration and review of the biodiversity guidelines under CBD and recommended their use.

The 1973 *Agreement on the Conservation of Polar Bears* also requires the parties to establish some kind of prior evaluation procedure for proposed activities that may affect “ecosystems of which polar bears are a part”.¹³⁹

3.3.5 The 1992 UN Framework Convention on Climate Change (UNFCCC)

Assessments are used for a variety of purposes in the climate regime established by the UNFCCC, including mitigation, adaptation and finding the most effective measures that also avoid negative side effects¹⁴⁰. With the focus here on assessing effects on the environment, assessments for mitigation and reducing negative side effects¹⁴¹ are the most relevant¹⁴². Both these purposes are covered by art 4(1)(f). The article is written in the same tradition of unelaborated EIA obligations as CBD, and with the same objective of incorporating climate change as “common concern of humankind”¹⁴³ into domestic assessments¹⁴⁴. Likewise, it can be argued that this is feasible and therefore an obligation for parties with a demonstrated

¹³⁷ Art 2(1) restricts its jurisdiction to wetlands within the territory of a party.

¹³⁸ Resolution VII.16 of the COP

¹³⁹ Art II. See Koivurova 2002:158.

¹⁴⁰ See for example art 3(3), 4(1)(b), 4(2)(b) and 4(8). The global assessments conducted by IPCC combine all these purposes.

¹⁴¹ An example concerning bioenergy: <http://www.eea.europa.eu/highlights/suspend-10-percent-biofuels-target-says-eeas-scientific-advisory-body>

¹⁴² Adaptation assessments study “effects of the environment on society” with risks and vulnerabilities as central issues. Much of the assessment efforts under UNFCCC seem to be directed towards adaptation, see for example <http://unfccc.int/2535.php> This is highly relevant in the Arctic, though not a central part of the discussion here.

¹⁴³ UNFCCC preamble

¹⁴⁴ Craik:99-100

assessment capacity¹⁴⁵. How, is almost completely up to the state to decide. The low precision may be explained by the fact that it is almost meaningless to link individual actions to direct, localized effects of climate change. That reduces the rights and need for other states to be notified and consulted according to precise rules.¹⁴⁶ Further, it can be argued that the substantive mitigation goals of the UNFCCC first of all will be achieved by other measures than case-by-case examination of different developments.¹⁴⁷ As long as these are met, states have a large leeway in defining their approaches. The article therefore can be read as a recommendation of SEA (ref “policies”) as a useful tool for states in developing cross-sectoral climate strategies. No guidance material has been developed on how it can be practiced.¹⁴⁸

3.3.6 Sectoral regulations

In addition to the many cross-cutting EA obligations examined above, additional provisions can be found in regulations for specific sectors. From the literature reviewed, EA in sectors seems only partially examined. It will require a deeper investigation into sectoral instruments and practices to establish the content of such assessment obligations, discuss differences and similarities with EIA and SEA and how overlapping obligations can be interpreted. Some results still are provided.

Fisheries

General objectives, principles and responsibilities for management of living marine resources are established in LOSC. These are specified in the 1995 agreement on straddling and highly migratory fish stocks¹⁴⁹ and regional fisheries bodies like NEAFC, which covers a sector of the AO. None of these conventions have explicit references to EIA, and the words

¹⁴⁵ Ibid p.162. Note also how the principle of common but differentiated responsibilities is reflected throughout art 4.

¹⁴⁶ Ibid p.170. Note that harm to biodiversity and the marine environment as a contrast can be localized and attributable to individual actions .

¹⁴⁷ Kyoto protocol art 3(1) and 2(1)

¹⁴⁸ Mail reply from UNFCCC secretariat 7 Aug.09.

¹⁴⁹ 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

assess/assessment are hardly used despite their common use in fisheries management.¹⁵⁰

Nevertheless, the whole regime is based on compilation of scientific data and use of assessments for various purposes. Core activities include:

- establishing the total allowable catch that avoids over-exploitation and produces a maximum sustainable yield¹⁵¹
- establishing selective regulations and evaluating their effects on fisheries resources¹⁵²
- assessment of impacts of fisheries on associated species and their environment, and adoption of plans or measures to mitigate these impacts¹⁵³
- conservation and management measures for new or exploratory fisheries that limit exploitation until there is sufficient data to assess the long-term sustainability of stocks¹⁵⁴

New and exploratory fisheries are highly relevant for the Arctic as fisheries expand into new areas with limited knowledge about the biology of many target stocks, the ecosystems and the effects of fisheries. The UNGA has recommended to “assess” whether bottom trawling has significant adverse impacts on vulnerable marine ecosystems. The results of the assessments shall be used to prevent or avoid such impacts and for further management.¹⁵⁵

Shipping

LOSC also establishes a framework for regulation of shipping that includes assessments.¹⁵⁶ That could in principle be applied to single shipments if a risk of harm is likely. However, it seems more in accordance with the principles for navigation if applied to shipping routes and new developments. Further, art 211 contain several indirect EA obligations to support the need for regulations that can prevent pollution. Accordingly, art 234 should imply a duty for the Arctic coastal states to assess if major harm can arise from shipping before eventually imposing unilateral restrictions on shipping in ice-covered waters. Though not examined

¹⁵⁰ The 1995 FAO Code of Conduct uses these terms more frequently.

¹⁵¹ UNFSA art 5(a-b), ref. LOSC art 61(1–3), 62 and 119(1)a

¹⁵² LOSC art 62(4), NEAFC art 7, 4(2) and 14

¹⁵³ UNFSA art 5(d-e), 6(3)d, 7(2)d and f, ref. LOSC art 61(4), 62(4)b and 119(1)b.

¹⁵⁴ UNFSA art 6(6)

¹⁵⁵ UNGA 2006, para 83-87.

¹⁵⁶ Art 206

properly, the general impression is that there are no explicit EA provisions in the IMO-conventions.

Offshore hydrocarbon activities

There are no comprehensive global regulations on the offshore hydrocarbon industry.¹⁵⁷ Parts of the activities are regulated by some global conventions¹⁵⁸ and may also be included in regional ones like the OSPAR and Espoo conventions.

The 2009 *Arctic offshore oil and gas guidelines* were for the first time elaborated in 1997 in parallel with the EIA guidelines and also included EIA. Following the Arctic Oil and Gas Assessment, the 2009 AC ministerial meeting adopted a third version.¹⁵⁹ This indicates that they have been used and achieved a better influence than the EIA-guidelines.

The guidelines are explicitly referred to as non-binding, “intended to encourage the highest standards currently available” consistently applied across different regulatory systems.¹⁶⁰ Geographically they apply to the wider Arctic area mostly used in the AC reports, with no specific reference to any maritime zones.¹⁶¹ Though regulatory authorities in the Arctic states are the primary users described, they are apparently intended to influence the whole offshore industry regardless of nationality.

SEA of proposed policies, plans and programmes was for the first time included in the 2009 offshore guidelines.¹⁶² It is recommended particularly for addressing cumulative effects on a regional basis, for example when considering opening new areas for exploration. No specific methods are provided; the general description of the EIA process and content seemingly is assumed sufficient. The description of impacts comprises the natural environment, socio-

¹⁵⁷ Koivurova and Molenaar :25, LaFayette: 273.

¹⁵⁸ Petroleum is covered by the regime governing “the Area”. MARPOL 73/78 applies also to platforms. For the decommissioning phase, the London convention (1972/96) on dumping and IMO guidelines in resolution A.672(16) are relevant.

¹⁵⁹ AC 2008 and 2009.

¹⁶⁰ AC 2009:4.

¹⁶¹ *ibid* p 4-5

¹⁶² *Ibid* p16

economic conditions, indigenous cultures as well as conflicts with other human activities.¹⁶³ Though not structured in a systematic way or elaborated much, the typical steps in an EIA procedure and content of an EIA report are identified. One adjustment to the petroleum industry is that risk analysis is seen as a part of EIA. It is also worth highlighting the high importance given to the follow-up phase. Monitoring, compliance audits and continuous management of risks and impacts shall lead to modification of operations, eventually also shut-down.

ISA regulations of deep seabed mining¹⁶⁴

The Area is managed as the common heritage of mankind by the ISA on a mandate from LOSC and its 1994 Implementation Agreement.¹⁶⁵ States have rights to certain activities,¹⁶⁶ but mineral resources including petroleum can only be extracted according to regulations set by ISA.¹⁶⁷ Despite high expectations, no commercial exploitation of these resources is expected in the near future for technical and economic reasons.¹⁶⁸

LOSC requires both ISA and flag states to adopt appropriate “rules, regulations and procedures” to protect the marine environment of the Area.¹⁶⁹ This includes a mandate for ISA to prepare “assessments of the environmental implications of activities in the Area” and rules for the activities.¹⁷⁰ ISA has made EIA-regulations for two types of activities in the exploration phase,¹⁷¹ but not for the exploitation phase.¹⁷²

¹⁶³ Ibid p 13 and 17

¹⁶⁴ LeGurun

¹⁶⁵ LOSC art 136-7, art 156-7 and “Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (with annex)”

¹⁶⁶ LOSC art 138, 112(1) and 143(3)

¹⁶⁷ LOSC art 137(2)

¹⁶⁸ LeGurun 2008

¹⁶⁹ Art 145, 209 and 215

¹⁷⁰ LOSC art 165(2) f and d

¹⁷¹ Integrated in regulations of 1) polymetallic nodules and 2) polymetallic sulphides and cobalt-rich ferromanganese crusts. Other activities, like petroleum extraction, have not been addressed yet.

¹⁷² LeGurun section 4.3

What is more interesting than the details of these regulations is the approach taken towards the very limited knowledge about the deep oceans that make accurate assessments almost impossible. ISA tries gradually to fill these knowledge gaps by taking an active role towards the scientific community¹⁷³ and by imposing obligations on contractors to deliver data from their initial explorations.¹⁷⁴ Data are synthesised in open data-bases. ISA is now in an early stage of collecting data for establishing the environmental baselines to be used when assessing potentially harmful effects in the future.

Ship-borne tourism

The tourist industry is not regulated by any convention, though its shipping activities are by several IMO-instruments. Some international organizations have adopted non-binding charters, guidelines and internal industry standards for promoting sustainable tourism.¹⁷⁵ From general descriptions, it seems that none of them include provisions on EA.

¹⁷³ LOSC art 143(1) gives ISA a mandate for both conducting and coordinating research. A particular emphasis shall be paid to research related to the environmental impacts of activities in the Area (Art 5(h) in Annex to the Implementation agreement)

¹⁷⁴ A proposed plan of work for exploration shall include an EIA and a programme for baseline environmental studies (Art 7, Annex to Implementation agreement)

¹⁷⁵ Molenaar 2005:18-27

3.3.7 Other relevant agreements

The 1991 Madrid Protocol on Environmental Protection under the Antarctic Treaty

Comparisons with the Antarctic treaty system are relevant because of the similarities in environmental conditions, the increasing marine activities and shared commitments to high environmental standards. As a regime for an international space, certain aspects are of particular relevance for ABNJ in the Arctic.

The Antarctic EIA provisions are the most detailed in international treaties beside the Espoo convention¹⁷⁶. They play a fundamental role in the environmental protection system for Antarctica. All areas south of 60°S are included, and all changes in any type of governmental and non-governmental activities are covered except fishing, sealing and whaling.¹⁷⁷

The protocol subjects all activities to assessment. The screening determines how thoroughly the impacts must be assessed by establishing three different types of EIA (fig 3.3). The Comprehensive Environmental Evaluation (CEE) has the most detailed provisions for the content of the report and detailed procedural requirements. Draft CEEs “shall be circulated to all Parties, which also shall make it publicly available for comment”.¹⁷⁸ This is a remarkable attempt to make a procedure for global participation in the management of a global common. The right for all parties to designate observers with “complete freedom of access at any time to any or all areas of Antarctica” is another mechanism that is being used also in EIA follow-up.¹⁷⁹ There are several provisions that impose monitoring as a means of keeping impacts low.¹⁸⁰

¹⁷⁶ Craik:101

¹⁷⁷ Art 8 of the protocol. Ref also annex 2.

¹⁷⁸ Ibid art 3(3). For the IEEs, states have the obligation to provide an annual list of what they have produced and make them available on request.

¹⁷⁹ Ibid p.203.

¹⁸⁰ Ibid p.191

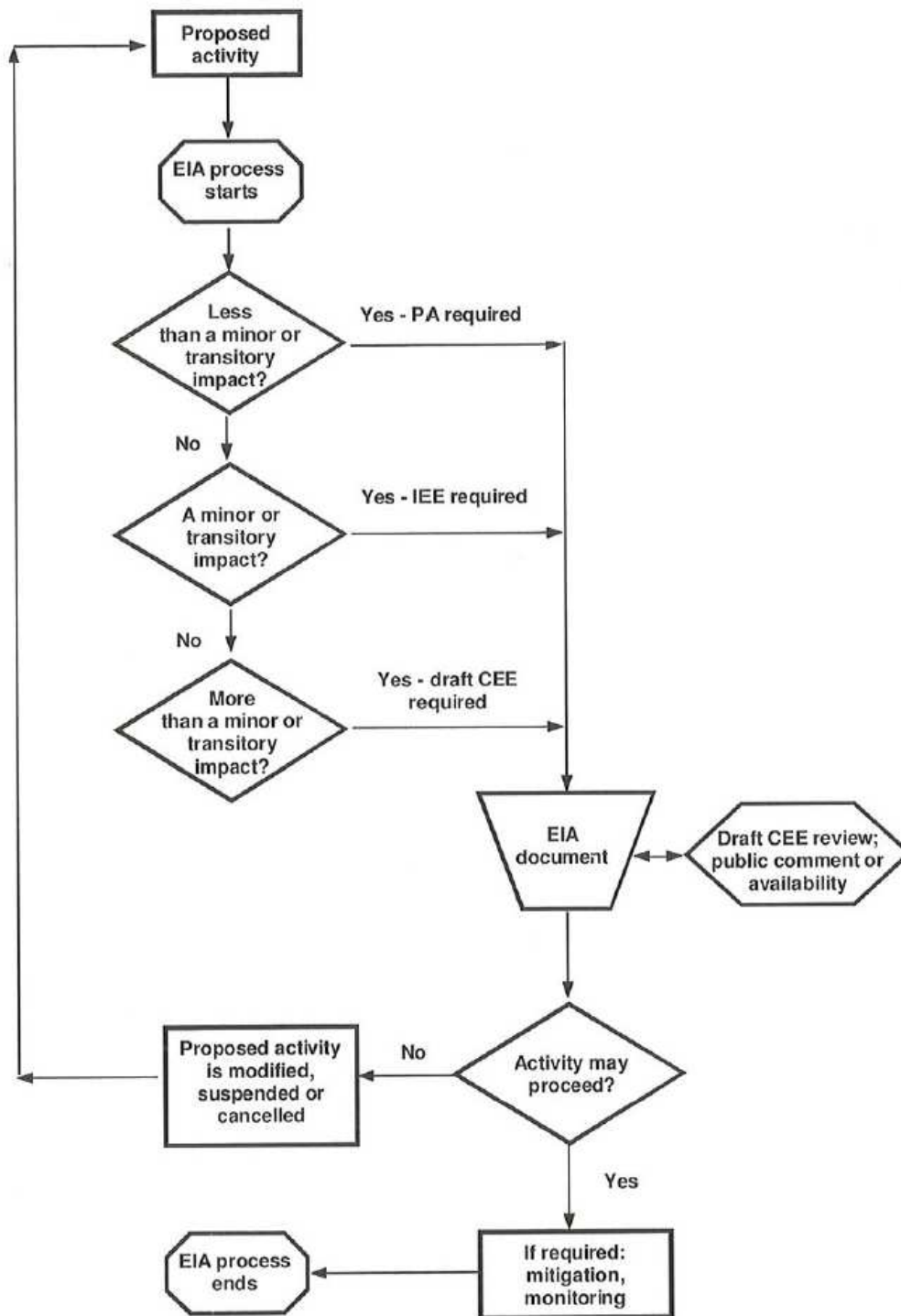


Figure 3.3: EIA process under the Antarctic environmental protocol (Bastmeijer and Roura 2008)

Other conventions

Several other treaties may also be relevant for EAs in the AO. These cover areas like whaling, dumping, industrial accidents, bi- or multilateral collaboration in parts of the AO and participation of indigenous peoples¹⁸¹.

3.4 EA in international judicial decisions and customary law

Disputes over commitments to undertake TEIA have been an element in at least five cases in international courts.¹⁸² Their significance as independent sources of EIA obligations is limited. One clear conclusion nevertheless is that there is no dispute over the existence of a TEIA-obligation when projects have environmental impacts beyond the state of origin. “In large parts this is due to the presence of treaty-based obligations, but [there are indications that] even in the absence of specific EIA obligations, both states and international courts have an expectation that prior assessment will be undertaken”.¹⁸³ Instead, the parties have disagreed on the nature of individual and overlapping obligations and whether or not satisfactory EIAs have been undertaken. Parties have i.a. argued that elaborated EIA provisions should influence the interpretation of ambiguous provisions. To which degree that is possible is still not clarified by the cases.¹⁸⁴ Neither has the content of EIA been clarified authoritatively.¹⁸⁵

EA has developed into a principle of international law.¹⁸⁶ It is not so evident if it also is an obligation in customary law, opposable to states unless they persistently object. Philippe Sands has contended that “There is considerable support for the view that EIAs are required as a matter of customary law, particularly in respect of activities which may cause trans-

¹⁸¹ Koivurova 2002:374-92 has a list of instruments selected for their relevance in assessing stationary industrial activities in the whole Arctic. I have excluded treaties concerned with land and watersheds and those applicable only in regions within the Arctic.

¹⁸² Atapattu:333-44, Craik:111-20.

¹⁸³ Ibid:119.

¹⁸⁴ Ibid:120.

¹⁸⁵ The most interesting seems to be the separate opinion by one judge about the obligation of continuous reduction of harm. (Craik:114-5). Ref 2.2 above

¹⁸⁶ Page 34

boundary effects”.¹⁸⁷ This view on TEIA is shared by Birnie, Boyle and Redgwell.¹⁸⁸ However, there are different views on whether states have an obligation to assess global effects.¹⁸⁹ Further, only one of the sources searched explicitly discusses EIA for effects wholly within states’ own borders. It concludes that it is not an obligation.¹⁹⁰ In any case, there is a decreasing customary obligation of EA, from situations where impacts are transboundary, via affecting issues of common concern to purely domestic values.

Craik explains some of the problems in defining customary EA obligations.¹⁹¹ His main concern, however, is that “whether the norm has achieved customary status is of secondary importance where the norm itself lacks the necessary detail to influence behavior.”¹⁹² That is certainly the case for the discussions just referred. None of the authors distinguish between EIA and SEA. Neither are they specific about process and content.¹⁹³ Instead of relying on an eventual customary obligation seemingly void of substance, it is better to use treaty obligations to define the content of EA.

4 The legal status of EA in the AO

With the existing sources and the acceptance of treaty obligations in the AO (appendix 1) – how far do existing requirements compel states to conduct EAs for activities in this ocean? Some basic issues like where, when and for which purposes EAs are required can be answered relatively easily by looking across the instruments. The more complex issues on how to assess require more interpretation.

¹⁸⁷ Quoted from Atapattu :347.

¹⁸⁸ BBR:169

¹⁸⁹ Compare BBR:167 and Atapattu:308

¹⁹⁰ BBR:167

¹⁹¹ Section 4.5

¹⁹² Ibid p124

¹⁹³ Atapattu :377 on the participatory rights associated with EIA is one exception.

4.1 Where and when are EAs required in the AO?

4.1.1 Geographical coverage

Some transnational EA norms apply to the whole AO, regardless of jurisdiction. A basic commitment to prior evaluation of potentially harmful activities is established by the harm principle. Somehow more specific, but still not legally binding, is the principle of EIA as expressed in Rio Principle 17.

LOSC art 206 takes this further as a binding transnational obligation to “assess” the potential effects of planned activities. Even though there has been an evolution in assessments since 1982, one should be cautious in generally reinterpreting this to mean only EIA and SEA; that may not have been the intention of the parties. On the other hand, the diligent duty of applying “best environmental practices” means that this evolution influences what may be seen as reasonable. For a particular state, its capability to assess will be judged from its national practices and other treaty obligations.¹⁹⁴ It is reasonable to assume that at least all the AC member states, probably all the states analyzed, have the capability to conduct EIA and most likely SEA according to a basic understanding of the content of the instruments like the UNEP guidelines. With this understanding, LOSC contains the most important universal EA-obligations on states in the AO. All the relevant states are parties to LOSC, with the vexing exception of the US that has not even signed.¹⁹⁵ The US on several occasions has asserted that it considers LOSC apart from part XI as reflecting international customary law.¹⁹⁶ If that also includes art 206, the US may accept that customary law on EA at least in the marine environment goes further than TEIA, or consider these further obligations as unimportant with its own assessment capabilities.

CBD art 14 is the other important transnational treaty obligation. Again, the US is the only exception to universal ratification among the Arctic relevant states. But as a signatory, the US has certain minimum obligations to conform to the treaty.

¹⁹⁴ Craik:128-129 .

¹⁹⁵ BBR:111

¹⁹⁶ Statement on United States Oceans Policy, March 10, 1983, 1 Public papers of President Reagan 1983, at 378-379; 22 ILM 464

		Affected areas			
		AO coastal state		High seas/Deep seabed	
Location of activity	AO coastal state	SEA-protocol	SEA-protocol	LOS CBD	
		Espoo conv.			
	High seas/Deep seabed	Deep seabed	mining	Deep seab.	mining

Table 3.1: The application of explicit EA obligations in international conventions to different assessment-situations inside the Arctic Ocean. The shaded area illustrates domestic EA when only a state's own territory is affected, whereas all other situations are TEIAs. LOSC and CBD are transnational, applicable to all situations.

While these treaties establish a transnational obligation of EAs, other explicit provisions on EA apply only to parts of the AO as illustrated in table 3.1. In addition, indirect EA requirements are found in CMS, Wetlands, UNFSA and OSPAR. The state parties to these conventions will benefit from having EA legislation and practices in place for their various special purposes.

4.1.2 Threshold and values

It is a rather uniform understanding that an EA is triggered when there is a likelihood of significant environmental harm. The origin of the significance threshold goes back to the 1939 *Trail Smelter* arbitration. Provisions using it can be found in the UNEP guidelines, Rio principles 17 and 19, CBD and the Espoo convention, in practice, also LOSC¹⁹⁷ and the Antarctic protocol.¹⁹⁸ The criterion contains elements of both probability for the harm to occur, its magnitude or other characteristics and inevitably a degree of value judgment. It requires some sort of legal test and is not trivial neither from a legal nor a practical view.¹⁹⁹

¹⁹⁷ Craik:133

¹⁹⁸ Bastmejer and Rouka:182

¹⁹⁹ Holder 2004:ch.4 discusses the legal complexities of significance.

The different thematic focuses of the conventions naturally mean that there are different values that are to be protected from significant harm. The LOSC is concerned with assessing whether “pollution or other harmful changes to the marine environment” may occur. This open formulation should capture all environmental harm resulting from any type of activity. The question rather is to which degree a duty to assess may be triggered when socio-economic conditions are affected. It may be indirectly reflected in how changes to the marine environment are considered harmful by their secondary effects on society. The CBD is concise in ascertaining that an eventual duty of assessment is triggered by effects/impacts on “biological diversity”. The broad definition of this term²⁰⁰ gives a comprehensive scope for assessments of the biological environment. A transboundary assessment according to the Espoo convention is triggered by likely impacts on biophysical factors, human health, indirect socioeconomic conditions and cultural heritage. Other interests, not linked to a significance-threshold in precise EA provisions, include climate change, migratory species, Ramsar-cites, fish stocks and species and habitats associated to fisheries. The duty to undertake an assessment comprises at least these values, which thus will be important determinants for the scope of individual assessments. Beyond that, states can assess whichever interests they want.

4.2 How should EAs be conducted?

The Espoo convention and its SEA protocol²⁰¹ are the only really elaborated treaty instruments for EA in the AO. With the predominance of unelaborated treaty obligations, how far is it possible to define the content and process of EAs?

4.2.1 Relationship between treaties

This raises the question whether more specific provisions from one treaty can fill in for general obligations in another.²⁰²

While LOSC and CBD mostly operate at the same level of generality, the EA provisions in CBD are more specific than LOSC; they have explicit reference to EIA/SEA, and later

²⁰⁰ Ref CBD art. 2

²⁰¹ Referred to jointly as the Espoo instruments

²⁰² Boyle 2007

guidelines elaborate how biodiversity can be incorporated into the general structure of EAs. Since the EA provisions of CBD are in accordance with the general principles of LOSC, they can fill in for the particular purpose of assessing biodiversity.²⁰³ Further, the declarations of the parties to the CMS and Wetlands conventions point to CBD as the vehicle for implementing their indirect EA obligations. CBD therefore seems more important when it comes to EA than the impression left from the many critical comments to its general and qualified nature.²⁰⁴

Correspondingly, the Espoo instruments can fill in when assessments under LOSC are transboundary, as they also can under CBD.²⁰⁵ More specific procedures therefore must be followed in TEIAs of “pollution/environmental harm” and “biologic diversity” between the maritime zones of Canada, Norway and Denmark, to a certain degree also of Russia and USA as signatories of the Espoo convention. A corresponding qualified commitment also exists for transboundary SEA.²⁰⁶ Due to their specificity, the Espoo instruments could in principle have the same function towards any other convention when parties conduct TEAs as a part of their obligations. They can however only do so for the activities they cover.²⁰⁷

4.2.2 EA as a special legal term

The presentation in ch 2 reveals several characteristics of the role, structure and content of EA. The question is to which degree this has legal implications. It has not had in customary law; but could “EIA” and “SEA” have developed a special meaning according to Vienna Convention art 31(4) that allows putting more flesh on these conceptual bones when interpreting treaties?

Craik argues that EIA has.²⁰⁸ During the 1980s, the use of EIA proliferated. Both nationally and internationally, specialized regimes had developed. Thus it can be assumed that

²⁰³ LOSC art 237(1) and 311(2)

²⁰⁴ Ref footnotes 127 and 129.

²⁰⁵ CBD art 22(1)

²⁰⁶ Espoo convention art. 2(7).

²⁰⁷ Ref 5.1.3 below

²⁰⁸ Craik:126-7. Craik uses “EIA” as a common term for EIA and SEA (p3). Here, it is clear from the context that he means EIA.

negotiating parties were conscious when they used general terms like “assess”, or the more technical term “EIA”. He concludes that “for those treaties negotiated after the mid-1980s, where the term “EIA” is used it should be interpreted to include the minimum core of procedural requirements in the UNEP EIA principles, unless some contrary intentions can be shown.”²⁰⁹ It is not clear what he means with the “minimum core”, but he adds that the approach still provides considerable scope to allow states to implement these requirements in the context of their domestic systems.

Holder argues in the same direction both for EIA and SEA.²¹⁰ “Even accounting for substantial variations between definitions of assessment and correspondingly different laws on EA, a generic legal form may be identified,” characterized by:

- Ability to predict environmental effects
- Judgments of how significant effects are
- Consideration of alternatives
- Participation by experts and non-experts in the assessment process and discussions of the design of the project or strategy under consideration
- Regulation of decision making by requiring the result of the EA to be taken into account before consent is granted.

These characteristics can hardly be seen as contradicting the UNEP principles. Rather they emphasise what, in the words of Craik, may be seen as the core of them.

Caution should be made that such an interpretation requires that the negotiating parties explicitly have used “EIA”, “SEA” or correspondingly precise wording. In the AO context, this is the case only for CBD and the ISA regulations of deep seabed mining.²¹¹

4.2.3 Conclusions on EIA

It seems that the UNEP principles can be seen as a minimum requirement for how to conduct EIA in all zones of the AO. This conclusion is based on an interpretation of what is reason-

²⁰⁹ *ibid*

²¹⁰ Holder 2004:12 and subsequent chapters. Her use of EA encompasses both EIA and SEA (p1).

²¹¹ An understanding of the terms along these lines could in principle be read into the Espoo instruments and the Antarctic protocol, but has little relevance since they define an even more precise meaning.

able for the particular group of “Arctic relevant states” when discharging their obligation to “assess” according to the LOSC. For biodiversity assessments according to CBD, it is a clear conclusion.²¹² Because of the wide participation in CBD and the great likelihood for biological resources to be affected by the most actual developments in the AO, CBD may in fact be the most important transnational instrument for structuring EIAs in the AO.

The more elaborated procedures of the Espoo convention must be followed in the particular situation of TEIA between the maritime zones of its parties and activities included in its criteria. There are differences from the UNEP principles, like its specific screening procedure, the exclusion of indirect, cumulative and long-term effects as mandatory impact categories and more elaborated follow-up.²¹³ It should also be noted that both instruments are rather unspecific about scoping, despite the high importance of this phase for the conduct of an assessment and the efficiency of the EIA system. Where the Espoo convention goes far beyond UNEP, is in the detailed provisions on the transboundary procedures.

Indirectly, the Espoo convention also influences domestic EIA in Canada, Denmark and Norway, but it is no legal obligation to conduct domestic EIAs accordingly.

The Arctic guidelines have the role of adapting the use of EIA to Arctic conditions.²¹⁴ While elaborating on the same structure as the UNEP guidelines, the lower Arctic-specific thresholds for screening and sensitivity-criteria are important. The two guidelines also go further than UNEP principle 10 in emphasizing the follow-up phase.

4.2.4 Conclusions on SEA

The specialized SEA provisions in the SEA-protocol have minimal influence in the AO since Canada, Russia and the US have not even signed it. Norway, as the only party among the AO coastal states, has the obligation to apply the protocol both to domestic and transboundary SEA. For other countries, the CBD guidelines provide the only specific SEA procedure, which applies to all maritime zones in the AO. For transboundary SEA between Canada,

²¹² Ref both “special meaning” and the biodiversity guidelines.

²¹³ Ref art 7(2) versus UNEP principle 10. Note that follow up is voluntary in both provisions.

²¹⁴ Koivurova 2002:172

Norway and Denmark, there is also a qualified obligation to use the procedures of the Espoo convention for SEA.²¹⁵

5 Gaps and options

So what are the gaps in the regime for EA in the AO, and how can they be met?

5.1 Identified gaps

5.1.1 Accession to existing conventions and instruments

The LOSC and polar geography give the coastal states a primary, but not exclusive responsibility in managing the activities in the AO. It is therefore interesting to see how they have accessed (and implemented) the most important conventions for EA. The US is in a very special position by not being a party to any of these, neither the LOSC, CBD nor the Espoo convention with its SEA-protocol. This raises doubt about its willingness to enter into binding obligations to EA in the AO, both in its own maritime zones, towards its neighbouring coastal states and ABNJ. Russia is the other state that is lagging behind by not being a party to the Espoo instruments. In addition, Canada and Denmark are not parties to the SEA protocol. This undermines the legitimacy of the AO coastal states having “a stewardship role in protecting [the unique AO ecosystem]”.²¹⁶

5.1.2 Geographic/jurisdictional coverage

Domestic EA: Domestic EA is subject to the weakest obligations in general principles and customary law; the harm principle after all also gives states “the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies”.²¹⁷

Exactly where the borderline towards international commitments goes in practice is hard to say; issues of common concern like biodiversity and climate change should instigate

²¹⁵ Espoo convention art. 2(7).

²¹⁶ Illulisat declaration

²¹⁷ Rio principle 2

assessments and may subject even a majority of the relevant developments to it. What is transboundary may also be extensive in a movable marine environment.²¹⁸

The question then is how strong the obligations from LOSC and CBD are upon the five AO coastal states for domestic EA. LOSC is the most general and far-reaching, mandating both SEA and EIA for any type of activity and any type of environmental harm. This is however only an obligation if it can be seen as a reasonable diligent practice for these five states. As long as they do not confirm this interpretation in a more binding form, it will still be doubt upon the issue, not the least how far they see themselves as bound by more specific procedures, like the UNEP principles. The more specialized obligations of SEA and EIA for biodiversity are made clear under the CBD, but the AO coastal states that are parties need to recognize the content by implementing them into their national EA systems.

The Arctic EIA guidelines surely imply a commitment for domestic, Arctic specific EIA. The harsh reality is that there is no indication that they are being implemented.

TEA between states: An obligation to assess for activities that may harm other states territories have a strong place in general principles and is also the clearest EIA-obligation in customary law. The Espoo instruments potentially could elaborate these principles into practical procedures between the coastal states in the AO. This effect is limited by the lack of ratification and the limited marine relevance following from the project lists.²¹⁹

Despite the scope of this discussion, it should nevertheless be mentioned that the Espoo instruments may be used for environmental problems origination *outside* the AO. Their effect in this regard is limited by the fact that participation is limited to UNECE members. The Arctic environment thus can benefit from the amendment to the Espoo convention being passed, and the SEA protocol entering into force; that will make them global instruments. Further, several non-Arctic UNECE-states have not become parties to the SEA-protocol (see appendix 1). It is interesting in this context that the European Commission wants to apply and

²¹⁸ Ref 3.1 above, last paragraph

²¹⁹ Ref 5.1.3 below

promote SEA to incorporate Arctic impacts in Europe and share EA experience with the Arctic countries.²²⁰

TEA and ABNJ: ABNJ is the major weakness in the geographical coverage of the treaties. LOSC and CBD in principle apply to these areas; how, is under discussion at least for biodiversity.²²¹ The only more detailed provisions for ABNJ are under development by ISA, but have little practical interest in the AO for the near future. ABNJ are also excluded from the coverage of the Espoo instruments; impacts upon these areas arising elsewhere shall not be accounted for. Neither are the instruments applicable for assessing activities in the high seas nor deep seabed. The lack of more specific EA rules for ABNJ is a lacuna in the international legal regime on the background of the harm principle.

Managing ABNJ contains a delicate problem: Who shall represent the common interests in these global commons, particularly in assessments? The US proposed in the 1970s that UNEP could have such functions,²²² and mandating international organizations like ISA is one possible approach. The EIA provisions in Antarctica demonstrate another approach that attempts to bring in views from states and their citizens.

5.1.3 Gaps in sectoral coverage

LOSC and CBD apply to all sectors. That is not the case for the Espoo instruments and limits their field of application. The listing of sectors²²³ and activities²²⁴ are biased towards developments on land and only partly cover the likely current and future activities in the AO.

Fisheries may be subject to SEA; but since catching of fish is not on any of the subsequent lists (fish farming and some fishing factories are), obligations do not arise for neither transboundary SEA nor TEIA. One implication of this is that the Espoo procedures cannot fill in for fishery assessments under for example UNFSA. Shipping activities may be subject to SEA through “transport”, but the next list establishes an obligation only for “trading ports”. Tourism can in principle be subject to SEA, but the tourist developments included on the next

²²⁰ EC:4

²²¹ Ref the two processes referred in 3.3.4 above.

²²² Koivurova 2002: 289-90

²²³ SEA protocol art 4(2)

²²⁴ Ibid with annex I and II, Espoo convention annex I

lists are of little relevance for the cruise industry; neither is maritime tourism listed for TEIA. Offshore oil and gas is the only maritime activity that seems relatively well covered both for SEA and TEIA; it is explicitly mentioned together with pipelines, major storage facilities and terminals.

5.1.4 Unelaborated and overlapping assessment obligations

The predominance of unspecific and indirect EA obligations is problematic (LOSC, OSPAR, sectors). Parties to the respective conventions in principle can make obligations clearer by amendments to the treaty texts, making guidelines or clarify the relation towards treaties with more specific provisions of EA, like CMS and Ramsar have done towards CBD.

This is particularly the case for some of the sectorial legislation. EA is not an explicit obligation in any of the conventions examined. That could indicate an attempt from the negotiating parties to avoid conflicting obligations towards MEAs with such provisions. On the other hand, there are enough occurrences of “assessment/evaluation” etc and implicit EA obligations to create confusion. A first question is what type of assessments that may meet the obligations, or even be recommended through further guidance to the parties? EA may be relevant, but there are also specialized assessment tools in use, for example stock assessments in fisheries and risk assessments frequently used for shipping and petroleum. The legal status of such tools and their relationship to EIA and SEA should be a theme for further inquiry.

A related question is how to meet overlapping assessment obligations that may arise from unspecific sectorial legislation and explicit EA obligations with different levels of specificity. Overlaps may arise particularly towards LOSC, CBD and the Espoo instruments. Particularly for those sectors where there are specialized assessment tools in use, an interesting question is whether these also meet specific EA obligations, or if some changes to the assessment practices in the sectors may be necessary.

5.1.5 The legal status of SEA versus assessment needs

With the SEA protocol not being relevant for the AO, there are only weak and/or unelaborated SEA obligations available (CBD, Espoo convention, Oil and gas-guidelines). This is problematic with the strong need for strategic assessments in the current phase of development of the AO.

The ecosystem approach to ocean management has become a cornerstone in modern ocean policy.²²⁵ This has consequences for the types of assessments needed. Put in simple terms, it requires integrated assessments of the whole marine environment and all the processes influencing it, followed by the development of broad ocean policies across all sectors. Within such a framework, there will be a need for many other more specialized assessments according to various needs. This approach has been recommended to the UN as the instrument to be developed at multiple scales under the regular process that shall keep the world oceans under review.²²⁶ The AC intends to participate in this process.²²⁷

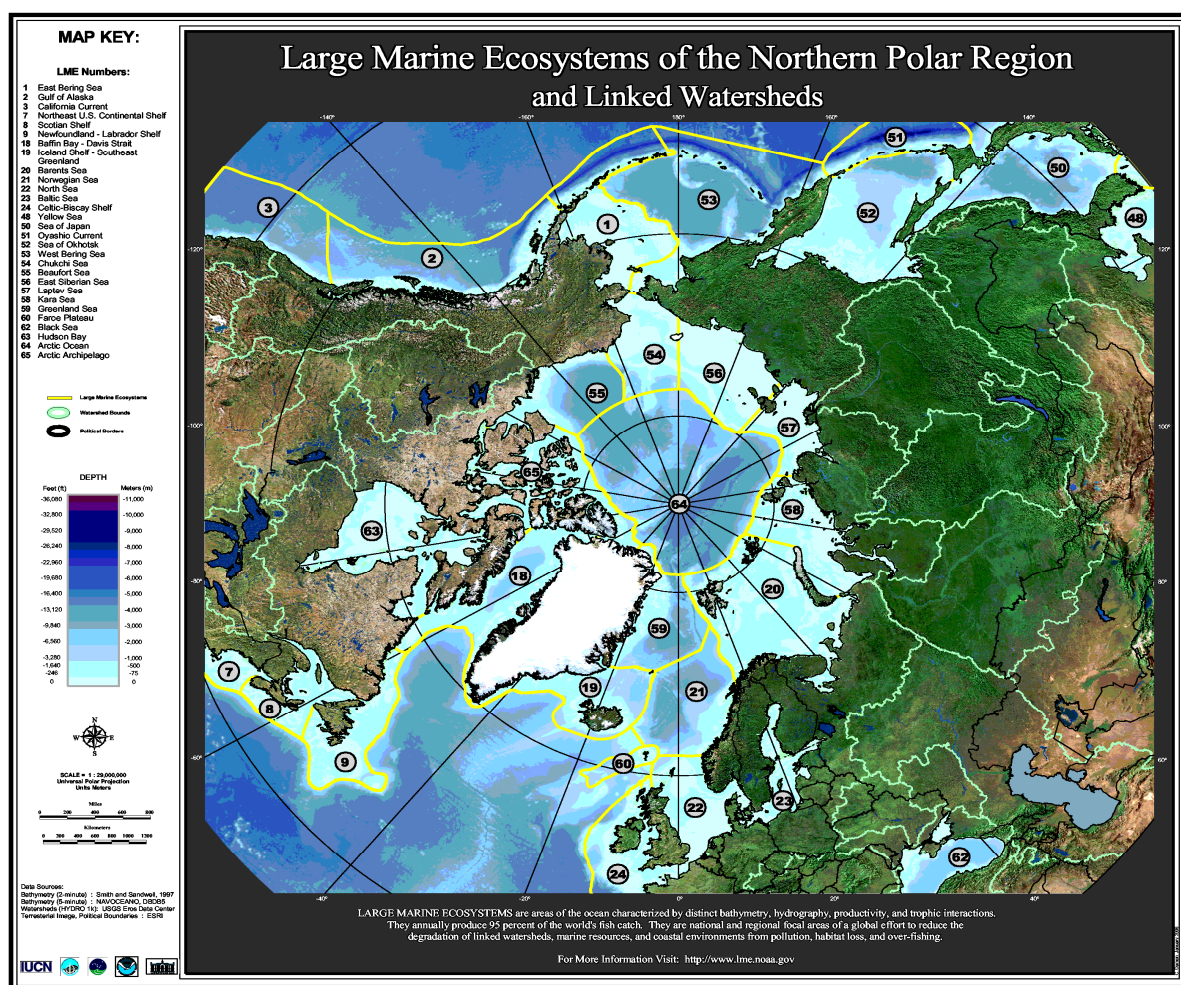


Fig 5.1 Large Marine Ecosystems in the wider Arctic.

²²⁵ The 2002 Johannesburg POI encouraged governments to apply the ecosystem approach for the sustainable development of the oceans by 2010.

²²⁶ UNEP/IOC-UNESCO 2009:ch. 2.

²²⁷ AC 2004:para.7.1.4

The ecosystem approach is a guiding principle in the Arctic Marine Strategic Plan.²²⁸ 17 Large marine ecosystems are identified, and assessment activities are gradually being taken up in some of them.²²⁹ At the level of the AO, no initiative has been taken to make an integrated marine assessment, but marine building blocks exist in other Arctic assessments.²³⁰

It can be argued whether integrated assessment as introduced above is SEA, or if it only shares some of the same characteristics.²³¹ The main point in this context is to establish that both in the UN-system and in the AC, there is a commitment to develop an overarching, strategic tier of integrated assessments. The thinking about this as a framework for more detailed assessments both in geographical terms and for different sectors and themes, corresponds to the ideas about vertical integration or “tiering” introduced in ch 2. One of the roles of the higher tiers of assessments and decisions is to strengthen and streamline further assessments, ultimately at the project level.

The knowledge base and rapid changes in the AO is another line of arguments pointing to the strategic level. Rapid and large changes will make the already inadequate understanding of the Arctic marine ecosystems less relevant. It will also make predictions about the future more insecure. The uncertainties created by this cannot be resolved in project-level assessments. Rather there is a need to continuously synthesize knowledge from research and monitoring of larger systems and make predictions of their future development under the influence of several human and natural pressures. This is another assessment need where SEA has a place.

5.1.6 Specific steps in EA procedure

An analysis of gaps in particular steps in the EA procedure in reality mostly is a reflection over the Espoo instruments since these contain the only elaborated treaty obligations:

Screening: The many “holes” in the screening criteria in the Espoo instruments should be contrasted to the Antarctic approach of subjecting all developments to some kind of

²²⁸ AC 2004

²²⁹ Hoel (ed) 2008, Siron et al 2007

²³⁰ UNEP/IOC-UNESCO 2009, review of Arctic assessments (in annex)

²³¹ “Para-SEA”, according to Dalal-Clayton and Saddler:12.

assessment procedure. This also contains problems since all thresholds in screening have a tendency to result in proposals trying to avoid the most cumbersome obligations.²³² It is however an interesting alternative to consider in an area where high environmental standards is promoted.

Scoping: Scoping is only included in the SEA protocol, but public participation is voluntary.²³³ This is problematic; without participatory scoping, the assessment may lose important input that can enrich the process, whereas the public loses the most important opportunity to influence the content of an assessment.

IA and reporting: The Espoo convention qualifies the obligation to develop alternatives.²³⁴ The SEA protocol does not, apart from saying that they should be “reasonable.”²³⁵ It has been said that alternatives is at the heart of EA; without it, the instruments loses much of their ability to create environmental friendly solutions.

Examination: UNEP principle 6 about impartial examination of EIAs prior to decisions is not followed up in the instruments discussed. Instead, many domestic systems rely on the comments from involved parties in evaluating also the quality of the assessments and the discretion of a competent authority – ultimately the courts.²³⁶ This is problematic particularly when proponents elaborate the EIAs because they may influence its content to their benefit.²³⁷ The lack of impartial scrutiny can create an imbalance in the possibility for weaker parties to address low-standard assessments.

Follow up: Post project analysis is optional in the Espoo convention, though its objectives, content and implications are rather well elaborated.²³⁸ The protocol makes monitoring of plans and programs obligatory with a duty to take remedial actions in case of unforeseen

²³² Bastmeijer and Rouka

²³³ Art 6

²³⁴ Appendix II

²³⁵ Art 7(2)

²³⁶ Netherlands Commission for EA is one exception (<http://www.eia.nl/>)

²³⁷ Holder 2004

²³⁸ Art 7 with appendix V

effects.²³⁹ The convention thus does not fully incorporate a duty to continuously review and mitigate harm through the operation of a project, like also underlined in the two Arctic guidelines and the Antarctic protocol.

5.2 Approaches to addressing gaps

5.2.1 To treaty or not to treaty

The general discussion of Arctic governance is a necessary starting point also when discussing EA. The debate about soft and hard law instruments is an important part of this. The AO coastal states have reasonably stated that a general Arctic treaty that replaces the law of the sea is not an option. That does not exclude a regional treaty building upon LOSC, and the AC has also said it periodically will analyze the applicability of a regional seas agreement.²⁴⁰ But as long as any such legal framework is not in place, the soft-law collaboration in the AC is the only regional framework that exists. Even since it incipient in 1991, a strategy has been to try to establish legal solutions to identified problems. After evaluating major international instruments, the states then agreed to “[...] pursue together in international environmental fora those issues affecting the Arctic environment which require broad international cooperation.”²⁴¹ The 2009 Tromsø declaration confirms this approach. The AC therefore does not exclude use of legal solutions in general. The question rather is if an Arctic issue needs legal solutions, and if so, which instruments that are available or need to be developed.

First, what can the AC do with EA? One typical AC activity would be to exchange experience between the countries and support each other in developing better capacities. These are valuable contributions that can raise EA on the Arctic agenda again, contribute to the improvement of the existing EA systems and pave the way for their future development. Systematic reporting and review of Arctic marine assessments would be a valuable element in this, but may be difficult unless supported by a clearer obligation like under the Antarctic

²³⁹ Art 12

²⁴⁰ AC 2004, para.7.3.4

²⁴¹ Rovaniemi declaration, included AEPS

environmental protocol.²⁴² Another activity would be to upgrade the EIA guidelines to become “operational guidelines” for EIA and SEA.²⁴³

Individually, AO coastal states could become parties to the most important conventions and implement them. That would establish reciprocal obligations and mechanisms for conflict resolution between all of them, and mechanisms for review of implementation through the respective conventions.

There are shortcomings of this approach that point to the need for legal developments. The first is that ABNJ is a lacuna in the EA instruments. ABNJ should be included in TEA obligations, and more specific procedures need to be established to meet future developments there. The other problem is related to the states involved. The Arctic EIA guidelines focused mostly on developments on land and therefore could be limited to the Arctic states. In the oceans, all states have rights to certain activities and obligations to assess their environmental impacts, particularly in ABNJ. These states need to be brought into and influence an EA regime. A third argument is the high ambitions for the environmental standards in the Arctic, where the Antarctic protocol sets a benchmark for EA. Finally, the dominance of relatively unelaborated binding EA standards combined with the marine “holes” in the Espoo instruments require some sort of legal development.

5.2.2 Two approaches to treaty solutions

The most important gaps found here are not specific for the Arctic. The Arctic states therefore could be active in improving global instruments. It has been proposed to make an EIA protocol under LOSC.²⁴⁴ Though LOSC has provisions for amendments,²⁴⁵ no use has been made of the various procedures so far. The convention is a package deal after years of negotiations, and there is a fear that opening up the package will result in renegotiations of what was achieved. Further developments of LOSC therefore seem unlikely in the short run.

²⁴² See the coverage in http://arcticcentre.ulapland.fi/aria/proj_by_countries.asp versus Bastmeijer and Rouka's description of mandatory reporting in Antarctica

²⁴³ Ref 1.2.2 above

²⁴⁴ Tanaka

²⁴⁵ Art 312-6

The processes referred to about assessments of biodiversity in ABNJ are also global.²⁴⁶ A similar effort, though not global (yet), would be to address shortcomings in the Espoo instruments.

Common for such attempts is that the processes are out of control of the Arctic states. Processes may be driven by interests of other larger groups of states and be concerned about problems in other parts of the world. Even in cases where the Arctic states have a common position, there is a risk of being marginalized and loose time.²⁴⁷ It should however be underlined that global solutions, how cumbersome their creation may be, are needed if gaps in the global EA instruments shall be filled.

The other option is to use the possibilities that exist for creating a regional Arctic solution. Elaborating on the EA provisions of LOSC in a regional treaty is possible,²⁴⁸ and has been done by several regional seas conventions.²⁴⁹ The Espoo convention encourages bi- and multilateral agreements between states that may include more stringent measures or means of implementation.²⁵⁰ The draft TEIA protocol under the Caspian seas convention is an interesting example of how a TEA instrument can be set up between states with mixed affiliations to the Espoo convention.²⁵¹ Most important in this context is that Russia is involved in negotiating the protocol, which builds upon the Espoo convention with some Caspian modifications. If the political reality in the US and Russia still is that they do not want to become parties to the Espoo convention, it illustrates how its content can be adapted in a regional context and hopefully become acceptable. An issue for many of the Arctic states probably is how much should be put into binding form, how much could be more flexible through e.g. guidelines or completely up to the national systems of the states. As the general argument has been here, higher specificity than what dominates in the majority of current conventions should be pursued.

²⁴⁶ See 3.3.4 above

²⁴⁷ Ref Young about the need to raise the voice of the Arctic in global forums

²⁴⁸ Though not mentioned as a possibility in art 206, it follows from art 237

²⁴⁹ See Craik appendix 1

²⁵⁰ Ref 3.3.1 above

²⁵¹ Tsutsumi and Robinson. Ref also deBoer 1999.

If there is political will first of all among the AO coastal states, a regional solution will be faster. The Arctic states will have more control with the outcome and achieve more tailor-made solutions than going through global conventions. That could particularly be ensured if the AC functions as the negotiation platform.²⁵² Later adjustments may be necessary in case of developments in other treaty contexts. However, by developing a better instrument in the Arctic, the negotiating states may first influence global regimes. An eventual instrument at the moment most likely will be free-standing. In case of more overarching treaty development in the AO later, it could become a protocol.

6 Conclusions

The rapid melting of the Arctic sea ice and expected increase in economic activities puts the AO governance under pressure. Many governance discussions have focused on the needs and modalities for an Arctic treaty. This seems to be in an unfruitful standstill as long as regional treaty frameworks as alternatives to LOSC are on the agenda. The Arctic states are however positive to suitable international regulations. They have also recently repeated former calls for thorough impact assessments.

Environmental assessment (EA) is a common term for environmental impact assessment (EIA) of projects and strategic environmental assessments (SEA) of policies, plans and programmes. EA shall ensure that at least environmental consequences of new developments are taken into account before approval. EA do not impose specific environmental standards upon decision makers; rather it shall ensure that an informed decision is made, based on information from many sources and in an open dialogue with affected parties.

Basic commitments for assessments can be deduced from general principles of international law. Some of them, like the harm principle, are accepted as universal norms. Apart from Rio principle 17 about EIA, they are general in the sense that EA is only one instrument a state can apply for responding to them. Customary law and international jurisprudence do not bring much more clarity: the particular instrument transboundary EIA (TEIA) seems to be an

²⁵² The AC for the first time took this role when the Tromsø declaration approved the establishment of a task force to negotiate a regional search and rescue instrument (p5).

obligation, but without a defined content. Turning to conventions, EA obligations in regimes with broad international acceptance (LOSC, CBD, UNFCCC) tend to be rather unelaborated. CBD is an encouraging example of how subsequent guidance nevertheless can direct states to act more precisely. The most specific and elaborated treaties tend to be more regional with members that have more demanding EA-systems domestically (Espoo instruments, Antarctica, Arctic EIA guidelines).²⁵³

Assessment obligations in the AO are first of all determined by the participation in treaties from states with an interest in the area – most notably the AO coastal states. All states here defined as relevant except the US are parties to the LOSC and CBD. These define trans-national obligations to undertake EIA and SEA when any type of developments is likely to create significant harm to the marine environment or biodiversity, respectively. In the case of LOSC, this is based on an interpretation of evolutionary assessment standards that can be seen as reasonable for these states. The Espoo convention applies only to TEIA between states, not ABNJ. Its application is further limited by Russia and the US not being parties and criteria that excludes many marine activities. Other relevant conventions mostly have indirect EA obligations.

CBD is the convention that prescribes the most specific EIA procedures applicable to all zones of the AO. LOSC may be interpreted to require EIAs according to the 1987 UNEP goals and principles. The specific TEIA procedures of the Espoo convention apply only between Canada, Denmark and Norway for special purposes.

In lack of participation in the SEA protocol, CBD also has the most specific procedures for this instrument generally applicable in the AO.

Several gaps are identified:

- Several AO coastal states, first of all the US, are not parties to important conventions. The Espoo convention and its SEA protocol should be priorities for increased participation.

²⁵³ Craik:162

- The obligations in LOSC above are based on interpretation, while CBD procedures formally have a weak legal position. States should confirm them in a more binding form; by the AO coastal states due to domestic EA, by any state due to ABNJ.
- ABNJ is a lacuna in international EA instruments, both their exclusion from the Espoo instruments and the lack of more specific EA procedures for activities within these areas, apart from the evolving instruments for deep seabed mining.
- Many marine activities are excluded from TEA according to specific rules because of the criteria in the Espoo instruments.
- Sectoral instruments do not have explicit EA provisions. Unclear assessment obligations may arise when interpreted towards EA provisions in particularly LOSC, CBD and the Espoo-convention
- There is a mismatch in the weak regulation of SEA in the AO and the need for different forms for strategic marine assessments

The Arctic Council may take up EA as an activity within its non-binding mandate, supported by increased participation in treaties by individual Arctic states. This can move the assessment instruments forward, but will still have limitations. Several of the gaps identified require legal solutions, particularly low specificity and requirements for ABNJ. It is therefore suggested that legal developments are needed. If there is political support for further legal developments, a global or a regional track may be followed. It is suggested that a regional instrument will be faster, give larger control for the Arctic states and more tailor-made Arctic solutions.

Will better EA systems in the AO safeguard the Arctic environment? EA would be a necessary, but not sufficient condition. In order to make the instrument more effective for environmental protection, it seems necessary to raise the difficult and controversial discussion about how EA can be linked to substantial regulations, particularly when the findings demonstrate that there will be significant harm.²⁵⁴ The Arctic contains a unique opportunity to learn from past experience elsewhere and regulate better from the beginning as humanity begins to exploit what so far has been effectively protected by the sea ice.

²⁵⁴ Ref 2.4 above