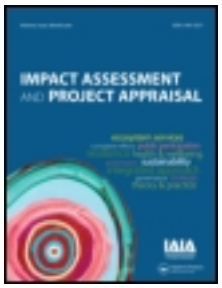

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Transboundary environmental assessment in the Arctic

Timo Koivurova

The main intent of this article is to examine the extent of applicable international treaties and other regulations that oblige the concerned states to perform transboundary environmental assessment (TEA) in the Arctic, and whether these have induced any state practice. Since the co-operation process between the eight Arctic states has adopted an instrument aiming to influence how TEA should be undertaken in the Arctic conditions, a closer examination of the development and content of these Guidelines for Environmental Impact Assessment is in order. One case in the Finnish Arctic is used to demonstrate what a quality TEA can mean in the Arctic context.

Keywords: EA, EIA, SEA, environment, climate change, Arctic Council, Arctic, transboundary, natural resources, state practice

THE ARCTIC IS A REGION of vast natural resources and a relatively clean environment compared with most areas of the world. For better or for worse, it is often compared to its southern counterpart, the Antarctic. Both do have extreme climatic conditions, receiving less radiation from the sun than other parts of the globe, and the ecosystems have had to adapt to very cold and dark environments with short and intense growing seasons. In such conditions, the ecosystems are simple, containing only a few key species, and are thus more vulnerable to human-induced pollution than those of more temperate areas. The comparison between the circumpolar areas may, however, be misconceived given that the two poles show more differences than similarities: the Arctic consists of ocean surrounded by continents, whereas the Antarctic is a continent surrounded by ocean; the Antarctic has no permanent human habitation, while the Arctic is inhabited by indigenous peoples and other local communities,[1] and the sovereignty is effectively frozen in the Antarctic whereas much of the Arctic is under the sovereignty of the eight states (see Koivurova, 2005; Rothwell, 1996, for comparison). While the Antarctic Treaty System (ATS) provides important checks on the economic development of the region, the Arctic will in all likelihood face environmental pressures from various economic activities, in particular increased fishing, maritime navigation and hydrocarbon exploitation.

The poles are also different with respect to their environmental assessment (EA)[2] regulations, even though both poles have their own environmental impact assessment (EIA) regulations. In ATS, EIA has figured prominently from quite early on, culminating with the moratorium on mining and setting out detailed legally binding EIA rules over other activities in the region, as enshrined in Article 8 and Annex I in the 1991 Protocol to the Antarctic Treaty of 1959 (see Bastmeijer and Roura, 2008, for a recent in-depth study of the Antarctic EIA system). Also the Arctic has its own set of regulations covering EA, Guidelines for Environmental Impact Assessment, adopted as part of the Arctic Environmental Protection Strategy (AEPS) for co-operation between the eight Arctic states in 1997. Yet, these guidelines are legally non-binding, with the result

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that the document has not been incorporated in national legislation nor administrative guidelines of the eight Arctic states, and set out only general guidance for states on how to implement EA in their Arctic regions.

The main intent of this article is to examine the extent of applicable international treaties and other regulations that obligate the concerned states to perform transboundary EA (TEA) in the Arctic, and whether these have induced any state practice. One real-life case study is chosen to demonstrate what a quality TEA can mean in the Arctic context.

Before these main tasks, it is crucial to introduce the very particular administrative reality that prevails in the Arctic. Because much of the Arctic is part of the sovereign territory of the eight Arctic states, it is primarily the national (and sub-national) authorities that apply EA in the northernmost areas of these states, and thus it is important to examine the basic administrative structures within which EA takes place. Another important development to be studied is the Arctic-wide operation between the eight Arctic states that commenced in 1991, and was revised slightly with the establishment of the Arctic Council in 1996 (transition from AEPS to Arctic Council took place 1996–1998). It is useful to introduce this unique inter-governmental process and examine in particular what kind of work has been done in the fields of EA and TEA.

Introduction to the Arctic Governance Framework

Before commencing the study of the prevailing governance system in the Arctic, it is pertinent to try to define it. The question of defining the southernmost boundary of the Arctic is complicated since several different criteria can be presented as to where this boundary should be drawn. Possible natural boundaries are, for instance, the tree line (i.e. the northernmost boundary where trees grow) or the 10°C isotherm (i.e. the southernmost location where the mean temperature of the warmest month of the year is below 10°C). In Arctic-wide co-operation, the Arctic Circle itself has been used as a criterion for membership, with only those states that possess areas of territorial sovereignty above the Arctic Circle invited to participate in co-operation. It thus includes the Nordic countries (Norway, Sweden, Finland, Denmark–Greenland, and Iceland), Canada, Russia and the USA (through Alaska), and will be used in this article as a point of departure.

The first stage of the Arctic-wide co-operation started with the 1991 AEPS. In the strategy, six priority environmental problems facing the Arctic were first identified (persistent organic contaminants, radioactivity, heavy metals, noise, acidification and oil pollution), together with international environmental protection treaties that apply in the region and, finally, specific actions to counter these threats were laid out. As part of the environmental protection action by the eight Arctic states, four environmental protection working-groups were established:

- Conservation of Arctic Flora and Fauna (CAFF);
- Protection of the Arctic Marine Environment (PAME);
- Emergency Prevention, Preparedness and Response (EPPR); and
- The Arctic Monitoring and Assessment Programme (AMAP).

In addition, a task force on sustainable development and utilization, under which the EIA Guidelines were negotiated, was established after the 1993 Nuuk ministerial meeting. Three ministerial meetings (after the signing of the declaration and the strategy) were held in this first phase of Arctic co-operation, generally referred to as AEPS co-operation.

The establishment of the Arctic Council in 1996 broadened the mandate of the co-operation to all common issues facing the Arctic (excluding matters related to military security), especially those relating to environmental protection and sustainable development; the four environmental protection working-groups of the strategy were integrated into the structure of the council, and one new working-group was established (Sustainable Development Working Group, SDWG). In the absence of a permanent secretariat, the work of the Arctic Council is heavily influenced by the priorities the chair-states lay out for their two-year chair period, at the end of which a ministerial meeting is organized. Senior Arctic Officials (SAO), a group of high-level officials, guides the work of the council between the ministerial meetings. The Arctic Council has also adopted new programmes related to environmental protection, such as the Arctic Council Action Plan to Eliminate Pollution in the Arctic (ACAP), which was recently turned into a sixth working group, and the Arctic Climate Impact Assessment (ACIA).

What is unique in the Arctic Council is the role it has given to the region's indigenous peoples, as they are normally accorded the status of NGOs in different inter-governmental organizations and forums. They are defined as permanent participants, a distinct category of membership between members proper and observers, whom the Arctic Council member states must consult prior to any consensus decision-making. The group of observers is large, and consists of inter-governmental and non-governmental organizations as well as states active in the Arctic region (see Koivurova and VanderZwaag, 2007, for a recent comprehensive analysis).

Within this approximate region, all the levels of law — international law, European law and national (and sub-national) legal systems — come into play, as much of the region falls under the sovereignty and sovereign rights of the eight states. Taking a closer look, we can identify three federal states (Russia,

Canada and the USA), with varying kinds of mandates accorded to their sub-administrative units (the state of Alaska, the northern territories of Canada, and the varying kinds of subjects of the Russian Federation), wherein indigenous peoples have been given different powers and rights. Finland, Sweden and Denmark are member states of the European Union (EU), but since Denmark's Greenland chose to exit from the then European Economic Community (and is thus not part of the European Community and EU), it possesses extensive autonomous powers in the form of a home-rule government. The European Free Trade Association (EFTA) states Iceland and Norway are bound by much of European law as parties to the European Economic Area (EEA) Agreement (Agreement on the European, 1992), with the exception of the Svalbard Islands, which were excluded from the EEA agreement by a special protocol (Agreement on the European, 1992)[3] due to its unique status established through an international treaty in 1920 (Svalbard Treaty, 1920).

All of the land area — continents as well as islands — is firmly under the sovereignty of the Arctic states, and much of the Arctic waters now falls under their exclusive maritime jurisdiction. The core of the Arctic Ocean remains part of the high seas as well as some holes enclosed by the exclusive economic zones of Arctic coastal states. The deep seabed is governed by the International Sea-Bed Authority, although some of the Arctic states are developing submissions to the Commission on the Limits of Continental Shelf to extend their continental shelf to even the deep sea-bed ridges of the Arctic Ocean floor.[4] There are also ongoing and potential disputes over the location of some of the maritime borders, especially those between Canada and the USA in the Beaufort Sea, and Russia and Norway in the Barents Sea, although in general it can be noted that the Arctic states have been able to resolve their maritime boundary disputes peacefully, via negotiations, conciliation and judicial procedures.[5]

The Arctic EA system seems most complex when national EA procedures are examined. Since these are extremely complicated systems, here only a brief mention can be made. The state of Alaska applies the federal National Environmental Policy Act (NEPA) EA procedures in certain cases, but does not have its own EA procedures (Manager of the Alaska Operations Office (Oil and Gas sector), part of the Pacific Northwest region of the US Environmental Protection Agency, personal communication email, 14 April 2008; Ferester, 1992, for the general overview of federal-state EA system) and Russia's regional EAs are much influenced by federal EA regulations.[6] Canadian provinces and territories have quite extensive autonomous powers in many fields of policy, including environmental policy; the northern territories of Canada have their own kinds of EA procedures, which place more emphasis on the rights and interests of indigenous peoples.[7] Of the Arctic states, only Finland and Sweden are required to implement the EU's EIA and SEA directives as member states of the EU. However, because of the EEA agreement between EFTA and EU, EFTA states Iceland and Norway are required to implement the directives as well. An exception is the Svalbard Islands, which was excluded from the EEA agreement and now has an EA procedure of its own, enacted by Norway (Act of 15 June 2001, especially chapter VII). Since Greenland is not part of the EU and has extensive self-government, it has a right to specify its own EIA rules.[8]

Even though there are some pieces of EA legislation that apply particularly to Arctic conditions, such as the EA procedures applicable to the Svalbard Islands and the Nunavut territory in Canada, it is mostly the case that the EA rules in international, European and national law do not take into account the very specific Arctic circumstances. With the exception of Iceland, the capitals of the Arctic states are far away from the states' Arctic territory, and it is thus no wonder that the Arctic perspective does not figure in their EA procedures.

All of the land area — continents as well as islands — is firmly under the sovereignty of the Arctic states, and much of the Arctic waters now falls under their exclusive maritime jurisdiction

The development of environmental assessment and transboundary environmental assessment from the Arctic perspective

The end of the Cold War was at least a partial factor explaining the emergence of two important international processes that had a distinct impact on Arctic EA and TEA: the signing of the AEPS and the conclusion of the United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context. Both were signed in 1991 and in Finland, in Rovaniemi and Espoo, respectively. Both also started to function from 1991 onwards. The AEPS, an Arctic-wide co-operation agreement commenced with working-group activities, whereas the Espoo Convention, even though it entered into force as late as in 1997, started immediately with meetings of the signatories.

The AEPS, which was signed on 14 June 1991, contained relevant guidance in the field of EA in

general but nothing of TEA, even though all the eight Arctic states that were members of the AEPS had adopted the Espoo Convention on 25 February 1991, and most of them had signed it on 26 February 1991;[9] some of them had accepted it as binding fairly soon after its signature.[10] There were also high expectations immediately after the signing of the convention that the USA and the Russian Federation would ratify it within a short period of time. The report from the second meeting of the signatories states: 'The delegations of … the Russian Federation and the United States of America … expected that their countries would be able to ratify the Convention in the course of 1993' (Report of the second meeting, 1992). Hence, the convention did contain a potential at the time to become a pan-Arctic legally binding framework for transboundary EIA (TEIA).

This manifested itself especially during the years 1993 to 1996, when the AEPS co-operation placed growing emphasis on the convention. The Espoo Convention was expressly promoted in the 1993 ministerial meeting in Nuuk Greenland, where the ministerial declaration states:

> Therefore, we shall maintain, as appropriate, or put into place as quickly as possible, an internationally transparent domestic process for the environmental impact assessment of proposed activities that are likely to have a significant adverse impact on the Arctic environment and are subject to decisions by competent national authorities. To this end we support the implementation of the provisions of the Convention on Environmental Impact Assessment in a Transboundary Context. (Nuuk Declaration, 1993: para. 8)

Paragraph 9 of the Nuuk Declaration is also relevant: 'We underline the importance of prior and timely notification and consultation regarding activities that may have significant adverse transboundary environmental effects.' The 1996 Inuvik Declaration considered the Espoo Convention much more briefly: 'reaffirming the support of our countries … on Environmental Impact Assessment in a Transboundary Context' (Inuvik Declaration, 1996: Preface). In the 1997 Alta Declaration, the Arctic states agreed to apply the 1997 EIA Guidelines, which contain a separate chapter on transboundary impacts that specifically mentions the Espoo Convention.[11]

Yet, the promise of the Espoo Convention becoming a pan-Arctic TEA regime has still to materialize. The ministerial meetings after the Inuvik did not pay any further attention to the convention, and when the Espoo Convention entered into force on 10 September 1997, Iceland, the Russian Federation and the United States had not accepted the convention as binding — a situation that has persisted to this day. The reason for this in the USA has probably been the focus on the environmental side agreement — the North American Agreement on Environmental Cooperation (1993) — to the North American Free Trade Agreement, under which an attempt has been made to formulate TEA rules (Craik, 2008). For Iceland, the reasons are said to include the improbability of TEA procedures because of its location and the fact that priorities need to be established for a country with such a small civil service, given that international activities require investment in time, attention and money (Official from the Ministry of the Environment of Iceland, personal communication, email, 3 April 2008).[12] In addition, it must be remembered that via the EEA Agreement, Iceland is legally obligated to perform a TEA procedure towards other EEA agreement parties.[13]

The Espoo Convention as a basis for Arctic transboundary environmental assessment

Even though three of the Arctic states have not become parties proper to the Espoo Convention, it is still this convention which is and will be the primary standard for TEA in the Arctic. This is due to many factors. Even though not all states are parties to it, increasingly the convention is used as a global standard for how to implement the requirements of customary law principle of no-harm, which is legally binding on all states of the world (Bastmeijer and Koivurova, 2008). In many instances, states apply the convention even though they are not legally obligated to do so. A good example of this is Finland's recent notification to the Russian Federation on the basis of the Espoo Convention of a planned mining project in Sokli — which is located above the Arctic Circle, 12 kilometres from the Russian border — even though Russia is not a party to the convention.[14] It is also good to keep in mind that Iceland, Russia and the USA are signatories to the convention and thus required not to frustrate the object and purpose of the treaty as stipulated in the customary law of treaties[15] and can be expected to become parties to the convention at a later stage.

Since the Espoo Convention contains political commitment only from the Espoo Convention parties where evaluation of the effects of strategic level policies and plans is concerned (Article 2 [7]), the parties decided to develop a special protocol on SEA. This was signed on 21 May 2003 by 35 states and the EC, with the Arctic signatories including Norway, Finland, Sweden and Denmark. The protocol focuses on creating national SEA procedure but also stipulates rules by which transboundary SEA is to be organized in certain cases of transboundary environmental effect.[16] This protocol was largely inspired by the SEA directive of the EC, which also contains provision on transboundary SEA (Directive 2001/42/EC, 2001, art. 7). The SEA transboundary procedure has far less potential in the Arctic since four of the Arctic states have not even signed the protocol, and the protocol has not entered into force as yet.

There are, in effect, many treaties in force between the eight Arctic states that provide for a transboundary environmental assessment type of procedure

Even though the Espoo Convention clearly established the primary legal basis for an Arctic TEA, it is not the only treaty providing for communication — or even full-blown TEA — procedure between states in cases where potential adverse impact from a proposed activity or plan at the other side of the border likely threatens the environment of the potentially affected state (see Koivurova, 2002: 181–286 for a detailed assessment). There are, in effect, many treaties in force between the eight Arctic states that provide for a TEA type of procedure. There are many applicable treaties and other regulations between the Nordic states[17] and between the USA and Canada (thus also covering the Alaska–Yukon border)[18] and one between Canada and Denmark (Greenland) (Agreement between Denmark and Canada, 1983). There are also treaties that apply throughout most of the region and contain a general level transboundary EA procedure (United Nations Convention on the Law of the Sea, 1982, art. 206; Convention on Biological Diversity, 1992, art. 14).[19] The primary function of all these treaties and other regulations is to substitute for the Espoo Convention in those cases where it does not apply. Yet, there are also borders which are not covered by any TEA type of treaty, such as those between the USA and Russia, and Russia and its Nordic neighbours. However, the other UNECE treaty, the Convention on the Transboundary Effects of Industrial Accidents (1992) does provide a TEIA procedure between Russia and its Nordic neighbours in situations where it applies.[20]

As briefly mentioned above, the Arctic states were able to adopt the Guidelines for the Environmental Impact Assessment in the Arctic (Guidelines), a Finnish initiative in 1994. At the time, there were great prospects of having the Espoo Convention to become a pan-Arctic Convention, which partly inspired the idea of developing these guidelines, given that the Espoo Convention does not only regulate TEIA but sets out certain minimum requirements for national EIAs. In the preamble, the legal nature of these EIA Guidelines is clarified:

> These guidelines are not intended to replace existing procedures adopted by international, national or provincial laws, land claim agreements, regulations or guidelines. As they do not recommend any particular procedure for EIA, these guidelines are applicable across jurisdictional boundaries and in different EIA processes. They aim at providing suggestions and examples of good practice to enhance the quality of EIAs and the harmonization of EIA in different parts of the Arctic. (AEPS, 1997)

The guidelines provide important guidance as to how EA should be conducted to give due consideration for the special conditions in the Arctic. The drafting of the instrument was prompted by the realization that the Arctic states share many challenges in applying EA in their Arctic areas. For example, the participation of the public in EA is constrained by the region's small population, which includes many indigenous peoples; the long distances and the limited number of cities and towns also affect how public participation is organized. Moreover, although environmental conditions vary in different parts of the Arctic, environmental assessment must address the similarities in the region's ecosystems and the challenge of integrating indigenous peoples and their traditional knowledge into the decision-making processes.

Chapter 11 of the guidelines provides useful recommendations for the Arctic states on how to organize their transboundary EA procedures. As all the Arctic states are signatories to the Espoo Convention, the Guidelines are meant to adjust the requirements of the convention to the Arctic.

Above all the guidelines urge that all activities assessed according to the national EA legislation should be screened also from the viewpoint of whether transboundary impacts are likely (AEPS, 1997, ch. 11, para. 8). Thus, all activities to which a national EA procedure is applied should be screened in view of likely transboundary impacts in the Arctic context. In addition, lower thresholds may be needed for those activities listed in the Espoo Convention if proposed to operate in the Arctic conditions (AEPS, 1997, ch. 11, para. 8).

According to the guidelines, the origin state should initiate the transboundary EA procedure in a very early phase of its national EA procedure. The guidelines document recommends that, already in the scoping phase of the national EA procedure, potential transboundary impacts should be identified and methods to be used for assessing them should be agreed upon between the concerned states; joint steering groups are recommended to perform these tasks (AEPS, 1997, ch. 11, para. 4). The guidelines also urge cooperation in the implementation of the transboundary EA procedures taking place in the Arctic (AEPS, 1997, ch. 11, paras. 7 and 8).

The Espoo Convention provides for a basic right for all those private legal subjects of the affected state located in the area likely to be affected to participate in the transboundary EIA procedure, just as the private legal subjects of the origin state may also participate. The guidelines go further and urge the Arctic states to be as inclusive as possible when organizing a transboundary EA procedure: 'Communities

in the area of anticipated impacts should be given an opportunity to participate, irrespective of their location relative to the border' (AEPS, 1997, ch. 11, para. 10). In the Arctic context, these communities normally are indigenous peoples, as referred to in Chapter 11 (AEPS, 1997).[21] The guidelines document also emphasizes that even though the activities may be far away from the border, transboundary impacts may occur anyway, especially with respect to large-scale activities such as oil and gas activities (AEPS, 1997, ch. 11, para. 9).

Unfortunately, even though the Arctic states agreed to apply these EIA Guidelines, in practice, according to the ministerial declaration from the Alta meeting, no real follow-up mechanism was established to oversee how these guidelines were in effect implemented. In the research conducted by the Arctic Centre's Northern Institute for Environmental and Minority Law for the Finnish Ministry for the Environment, it was found that only a few people from the stakeholders in the Arctic — environmental NGOs, indigenous peoples' organizations, companies, administrative agencies — even knew that the guidelines exist, let alone that they would have influenced any Arctic EAs (Koivurova, 2008: 151–174).

Transboundary environmental assessment application in the Arctic

TEA is becoming an increasingly commonplace phenomenon in state practice. This is because, although the Espoo Convention entered into force as recently as 1997, it is only now that states are starting to make greater use of it. A good illustration of this is Finland, which during 2007 received four notifications on the basis of Article 3 of the Espoo Convention.[22]

All in all, even though estimates are increasing that the Arctic's vast natural resources will be exploited, it is also true that this has not taken place as yet on any large scale. In many places of the region, more important is the functioning of the national or sub-national EAs since the international borders are distant from places of operation. This estimate was verified by the enquiries with the points of contact to the Espoo Convention.[23] On the basis of these answers, it can be concluded that relatively few transboundary EIAs and SEAs are ongoing in the Arctic region.

Thus, with the exception of the core Barents region (northernmost parts of Scandinavia and Russian northwest) — where international borders are close to each other — and the border between long-term co-operating partners USA's Alaska and Canada's Yukon, it seems there is little activity in the field of transboundary EA. There are four pending Arctic transboundary SEAs and EIAs where Finland has commenced the procedure on the basis of either the Espoo Convention or the SEA directive with its neighbouring countries of Norway, Sweden and Russia.[24] There is potential construction of a natural gas pipeline from Alaska to Yukon and further to Alberta but this still awaits the decision by the competent authority.[25] Interestingly, an SEA is being undertaken for the development of Iceland's Dreki (Dragon) maritime area for gas exploitation, even though this SEA is at least for the time being confined to national context. Yet, since the area is part of a jointly divided maritime zone between Iceland and Norway's Jan Mayen Island, it is expected that a transboundary SEA or EIA (at a later stage) procedure will take place.[26]

In the not so distant future, the international borders of the Arctic states will also approach each other in the Arctic Ocean basin, given that Russia has made a large submission covering almost half of the basin as part of its continental shelf. Other Arctic states are now developing their submissions, and it seems that in many places these will overlap or be otherwise very close to each other, resulting in the possibility for future disagreements and transboundary EA procedures. Here it needs to be kept in mind that those parts or pockets that remain part of the deep sea-bed are governed by International Sea-Bed Authority and its EA rules (see Le Gurun, 2008: 221–264, for a recent study).

Case study: Arctic transboundary environmental impact assessment

There is one pending case in the Finnish Arctic where the problems and possibilities of the Guidelines for EIA in the Arctic manifest themselves in the context of Arctic transboundary EIA. Finnish and Norwegian authorities have developed a plan to create a road connection from south of Lake Inari to the village of Nellim in Finland to Nyrud in Norway (see Ruokanen, 2006: 25–28, for a more detailed overview of the case with illustrations). The project is part of an overall road plan of 204 kilometres to connect the Finnish town of Ivalo with the Norwegian town of Kirkenes. The project on the Finnish side (from Nellim to the Norwegian border) is connected with plans in Norway to construct a road from Nyrud to the Finnish border. The new road connection would shorten the distance from Ivalo to Kirkenes by 32 kilometres.

The part of the road under consideration (from Nellim to the Norwegian border) on the Finnish side of the border is approximately 30 kilometres long. The project proponent, the Finnish Road Administration, asked the Lapland Regional Environmental Centre (LREC) on 29 September 2005 whether EIA for the road construction was needed. LREC proceeded to submit its views on the question to the Finnish Ministry for the Environment. As the road construction project involves a short distance, EIA is not mandatory according to the Finnish EIA legislation. However, according to Article 4.2 of the EIA Act, if the project is of such a nature that it is likely

to cause significant adverse environmental impacts, the ministry may decide that the project must undergo EIA. According to the EIA Decree, in such cases it is pertinent to study the project's characteristics, location and the nature of its impacts.

According to the LREC, neither the scope of the project nor its other characteristics are such that they are likely to cause significant adverse environmental effects. Moreover, there are only few residential areas that would be impacted by the construction. Nevertheless, LREC is of the view that the area under consideration possesses particular characteristics: it consists mostly of wilderness, and human interference with nature is at present very limited in the area. The road would also be located close to wilderness and nature protection areas. Importantly, LREC opines that the regeneration rate of the area as a northern ecosystem is poor; that is, it consists of vulnerable ecosystems, whereby the project would irreversibly alter nature in the area. The fact that the road would create a new international road link, with increased traffic, also suggests likely significant environmental impacts. LREC has also taken the view that even though there are not many inhabitants in the area, it is significant that many of these are indigenous Sami and especially Skolt Sami. For these reasons, LREC proposed to the ministry that the project was likely to have significant adverse environmental consequences and that an EIA should be undertaken, together with a co-ordinated application of the Espoo Convention with Norway (LREC, 2006).

The proposal by the LREC was followed by negotiations at the Ministry of the Environment, where representatives from the road management authority, as well as the municipality of Inari, were present and stated that in their opinion EIA was not necessary for completion of the project (Finnish Ministry of the Environment, 2006: 1). Yet the ministry decided, on the basis of reasoning similar to that espoused by LREC, that the project must undergo EIA (Finnish Ministry of the Environment, 2006: 1). Finland will thus carry out the EIA as a joint implementation project under the Espoo Convention with Norway and, in all likelihood, will also try to involve the Russian Federation, even though Russia is not a party to the Espoo Convention (responsible official in the Ministry of the Environment, personal communication, email, 2 June 2006, on file with the author). For some time now, Finnish policy has been to treat Russia as if it were a party to the Espoo Convention in order to induce it to ratify the convention.

The official responsible for making the proposal to the ministry, and whose reasoning was accepted by the ministry, seemed to apply the guidelines when making her decision. She identified exactly the kind of considerations that are highlighted in the guidelines as a basis for her proposal; for example, the presence of indigenous peoples in the impact area of the proposed activity, cumulative impacts, the vulnerability of the Arctic environment, and the possibility of transboundary impacts. When asked in an interview whether she was in fact applying the guidelines, she stated that this was not the case. She was aware that such an instrument had been created but she had not made use of it in making her decision (Responsible official from the Lapland Regional Environment Centre, personal communication, telephone interview, 17 May 2006).

When asked whether she was in fact applying the guidelines, she stated that this was not the case. She was aware that such an instrument had been created but she had not made use of it

This case is a good illustration of the problems and potential of the Arctic EIA Guidelines. The main problem is, of course, that the persons responsible for Arctic EIA are rarely aware of the document, but even when they are, they do not consciously apply it. Yet, the case also shows the relevance of the instrument. The responsible official clearly conducted a very well-reasoned and thorough study, on the basis of which she submitted that the EIA Act should be applied to the project. Even though she was not aware of it, she was making choices in implementing an Arctic EIA that are recommended by the EIA Guidelines (Responsible official from the Lapland Regional Environment Centre, personal communication, telephone interview, 17 May 2006). Evidently, in all EA procedures, including Arctic ones, there is a great deal of room for the officials in charge to make choices as to what considerations are given weight when making decisions. In some cases, these lead to poor-quality EAs and disregard for the special characteristics of the Arctic but in some instances, as in this case, Arctic considerations are given special weight. The value of the EIA Guidelines, if they were known and made use of, would be to guide the responsible officials in making exactly the choices that are most pertinent for the special conditions in the Arctic.

Conclusion

As the 2004 Arctic Climate Impact Assessment (ACIA, 2004)[27] and more recent studies and assessments have shown, the Arctic can be seen as the barometer of climate change. We can already witness the consequences of climate change in the region simply because snow and ice react very swiftly to climate change and these consequences will be more intense in the Arctic. Together with accelerating

economic globalization, this will mean vast transformation for the Arctic region. The previously inaccessible region, and its vast natural resources, will be open for exploitation.

Estimates abound that much of the world's undiscovered hydrocarbon reserves lie in the Arctic, resulting in increased pressure to exploit the Arctic's offshore hydrocarbon resources. The development trajectory is real and it is underscored in GLOBIO Report of the United Nations Environment Programme, which observes:

> In the last part of the 20th century, the Arctic has been increasingly exposed to industrial exploration and exploitation as well as tourism. The growth in oil, gas and mineral extraction, transportation networks and non-indigenous settlements are increasingly affecting wildlife and the welfare of indigenous people across the Arctic … A 2050 scenario was made using reduced, stable, or increased rates of infrastructure growth as compared to the growth between 1940-1990. The scenario revealed that at even stable growth rates of industrial development, 50-80% of the Arctic may reach critical levels of anthropogenic disturbance in 2050, rendering most of these areas incompatible with traditional lifestyles of many subsistence-based indigenous communities. (UNEP, 2001: 2)

In principle, most areas of the region are covered already by national and sub-national EIAs and SEAs, which can at least study the potential consequences for the vulnerable Arctic environment. TEA agreements also cover most relations between the Arctic states although some gaps remain. It would be important for Iceland, the Russian Federation and the United States to become parties to the Espoo Convention since this would further make clear the basic steps that need to be taken in order to examine also the cross-border impacts of planned activities and plans.

What would be needed, however, are clearer legally binding rules on how to perform EA and TEA in the unique Arctic conditions, where the environment is particularly vulnerable to human-induced pollution. Before such ambitious regulations could be in place, it would be of utmost importance to make use of the EIA Guidelines (which apply to project level EIAs and also SEAs), both in conducting national EAs and TEAs in the region. All officials who execute or co-ordinate the making of a TEA or EA have some room for discretion as to how to take the particular circumstances of the Arctic into account, as was clearly shown in the case study above, and that is well captured in the EIA Guidelines. If taken to active use, and perhaps revised and made more concrete — an action that the present chair of the Arctic Council Norway identified in its plans for its chair-period 2006-2008 — the EIA Guidelines could be a very important regulatory tool to meet the vast challenges posed to the region by the increasing exploitation of its natural resources.[28]

Two issues stand out for making TEA effective in Arctic region. The role of the working-groups of the Arctic Council is of vast importance, given that national line-agencies and region's indigenous peoples work in these bodies to promote environmental protection and sustainable development in the region. The officials and representatives in these working-groups share information on the economic development in their Arctic regions, and thus become also knowledgeable of planned economic activities possibly posing transboundary threats. Some of these working-groups also conduct scientific assessments, which raise awareness of the areas planned for economic development. One such recent assessment is the Oil and Gas Assessment by the AMAP working-group, which contains important information of also the planned hydrocarbon activities (see e.g. AMAP, 2008). All this sharing of information is likely to lead to enhanced awareness of the scope of the probable environmental consequences of development plans, thus including also transboundary impacts.

As pointed out in Chapter 11 of the EIA Guidelines, the role of indigenous peoples' organizations is of huge importance in promoting an effective TEA. Especially the transnational organizations of indigenous peoples, such as the Saami Council and Inuit Circumpolar Council, play an increasingly important role in supervising and reacting to transboundary concerns of indigenous peoples.[29] These organizations have become influential largely because of their unique status in the Arctic Council as permanent participants, thereby having access to various information sources as to what happens in the Arctic. Of great importance is also their role in making sure that indigenous peoples' traditional knowledge is taken into account in various scientific assessments, the most influential to date being the Council's ACIA. With these capacities, the Arctic indigenous peoples' organizations can promote public participation and in general enhance the quality of transboundary TEAs in the Arctic.

Notes

1. The 2004 Arctic Human Development Report (AHDR) by the Arctic Council applies the narrower definition of the Arctic, yielding a population of 4 million people. Furthermore, the report highlights that it is extremely difficult to assess how many of these people are of indigenous origin, given the differing definitions adopted in census statistics in the Arctic countries (AHDR, 2004: 27–41).
2. In this article, the term 'EA' will refer to both environmental impact assessment (EIA), which applies to projects, and strategic environmental assessment (SEA), which refers to assessment of plans, projects and policies. This also applies in the transboundary context: TEA is therefore composed of project level TEIA and strategic level TEA.
3. A special protocol was adopted as part of the EEA Agreement to the effect that Norway may decide whether to apply the EEA Agreement to Svalbard or not (Protocol 40). Norway decided to exclude the Svalbard Islands.
4. See the submissions to the Commission on the Limits of

Continental Shelf by the Russian Federation in 2001 and Norway in 2006, and reactions to these by other states, at the Commission's website at <http://www.un.org/Depts/los/clcs_new/clcs_home.htm>, last accessed 14 April 2008.

5. For an analysis, see Koivurova (2002: 56–64). The most recent was the conclusion of an agreement between the Government of the Kingdom of Norway on the one hand, and the Government of the Kingdom of Denmark together with the Home Rule Government of Greenland on the other hand, concerning the delimitation of the continental shelf and the fishery zones in the area between Greenland and Svalbard, Copenhagen, 20 February 2006 (signed 20 February 2006, entry into force 2 June 2006), United Nations Treaty Series 42887.
6. For interesting inter-disciplinary perspectives on the EA from the Russian Arctic point of view, containing also articles on the federal EA procedure and how it plays out in various Arctic regions of Russia, see the Special Issue on the Oil and Gas Industry, Local Communities and the State (guest editors Emma Wilson and Florian Stammler), *Sibirica*, **5**(2), Autumn 2006. Available at <http://www.berghahnbooksonline.com/journals/sib/index.php?pg=toc5-2>, last accessed 14 April 2008.
7. For the three northern territories, the EIA system is based on relevant land claim and the federal Canadian Environmental Assessment Act (CEAA): the Yukon Environmental and Socio-Economic Assessment Act (S.C. 2003, c. 7), at <http://www.canlii.org/ca/sta/y-2.2/>, last accessed 10 April 2008; for the Mackenzie Valley in the Northwest Territories, see <http://laws.justice.gc.ca/en/showdoc/cs/M-0.2//20080410/en?command=HOME&caller=SI&search_type=all&shorttitle=mackenzie&day=10&month=4&year=2008&search_domain=cs&showall=L&statuteyear=all&lengthannual=50&length=50>, last accessed 10 April 2008); EIA for Nunavut is established by Article 12 of the land claim agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada, at <http://www.ainc-inac.gc.ca/pr/agr/pdf/nunav_e.pdf>, last accessed 10 April 2008). See also Green and Binder (1995: 343–345). For a recent analysis of the role of indigenous peoples in EAs, see O'Faircheallaigh (2007).
8. Information about home rule and the applicable environmental legislation in Greenland (not including EA), at <www.nanoq.gl>, last accessed 14 April 2008). According to the head of department in spatial planning in Nuuk Greenland, Greenland has a right to specify their EIA rules (not yet authority to specify SEA rules), and this will take place within a year or so (email communication on 21 April 2008).
9. Of the Arctic states, Norway signed it on 25 February and the Russian Federation on 6 June 1991. See <http://www.unece.org/env/eia/convratif.html>, last accessed 14 April 2008.
10. The first of the Arctic states to ratify the Espoo Convention was Sweden, which did so on 24 January 1992. Thereafter, Norway accepted the convention as binding (23 June 1993), followed by Finland (10 August 1995), Denmark (14 March 1997), the EC (24 June 1997) and Canada (13 May 1998).
11. Chapter 11, 'Transboundary impacts', contains the following reference (pp. 40–41): 'The UN ECE Convention on EIA in a Transboundary Context, the Espoo Convention (1991, entered into force in 1997), provides a comprehensive framework for dealing with activities likely to have significant adverse transboundary impacts.'
12. The author has not been able to find reasons for why Russia has not become a party to the Espoo Convention.
13. Accordingly, Article 19 of the Icelandic EIA Act states: 'Should a project be deemed likely to have significant environmental impact in another state of the European Economic Area, the National Planning Agency shall provide this state with a description of the project together with available information on its conceivable cross-border effects. The National Planning Agency may require the developer to compile information on the potential effects in the state in question in the language of that state. When it is deemed likely that a project carried out in Iceland may have significant effects on the environment in another state of the European Economic Area, such a state shall be given the opportunity to express itself on the issue.' See <http://www.skipulag.is/focal/webguard.nsf/Attachment/MÁU%20lögin%20á%20ensku/$file/MÁU%20lögin%20á%20ensku.pdf>, last accessed 14 April 2008.
14. See the environmental assessment programme of the project developed in Finnish language, at <http://www.ymparisto.fi/download.asp?contentid=83123&lan=FI>, last accessed 14 April 2008. The notification was made on 8 April 2008 (*Lapin Kansa*, 16 April 2008: 8).
15. According to Article 18 of the Vienna Convention on the Law of Treaties, and the identical norm in the customary law of treaties: 'A State is obliged to refrain from acts which would defeat the object and purpose of a treaty when: (a) it has signed the treaty or has exchanged instruments constituting the treaty subject to ratification, acceptance or approval, until it shall have made its intention clear not to become a party to the treaty; or (b) it has expressed its consent to be bound by the treaty, pending the entry into force of the treaty and provided that such entry into force is not unduly delayed.' Reprinted at 8 International Legal Materials 679 (1969).
16. In the SEA protocol the transboundary article is in Article 10; see <http://www.unece.org/env/eia/documents/legaltexts/protocolenglish.pdf>, last accessed 14 April 2008.
17. In addition to the above-mentioned EIA and SEA directives, there are, for example: the 1974 Nordic Environment Protection Convention (NEPC), the English text can be found from 3 International Legal Materials 591 (1974); the 1976 Guidelines for Communication Between Finland, Norway, Sweden and Denmark on Security Issues Related To the Nuclear Installations Constructed Near the Border, Finnish Treaty Series 19/1977 <http://www.finlex.fi/fi/sopimukset/sopsteksti/1977/19770019> (Finnish language); the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, which can be found from 32 ILM 1069 (1993).
18. The following apply between the USA and Canada: the 1975 Agreement between the United States of America and Canada Relating to the Exchange of Information on Weather Modification Activities, the text that is reproduced in 14 ILM 589 (1975); the 1987 Agreement between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd, which can be downloaded at <http://arcticcircle.uconn.edu/ANWR/anwrint-agreement.html>, last accessed 14 April 2008; the 1991 Agreement between the Government of the United States of America and the Government of Canada on Air Quality, which is reproduced in 30 ILM 676 (1991). There is also pending work to conclude a TEIA treaty under the auspices of the North American Free Trade Agreement, see more closely Craik (2008).
19. All other Arctic states than the USA are parties to both of these treaties.
20. The applicability of the Espoo Convention derives from its definition of 'hazardous activity' as 'any activity in which one or more hazardous substances are present or may be present in quantities at or in excess of the threshold quantities listed in Annex I to the Convention and which is capable of causing transboundary effects', which encompasses most large-scale industrial activities. However, there is large list of exclusions from the scope of the convention.
21. Paragraph 10 reads: 'The Inuit Circumpolar Conference, the Sami Council and the Indigenous Peoples Secretariat are accredited non-governmental organizations on the Arctic Council, and which are active in several arctic countries. They may thus provide useful links to the public on both sides of the border.'
22. Finland received a notification from Estonia concerning: plans by the developer OÜ Nelja Energia to construct five offshore wind farms near Hiiumaa (an island located in Western Estonia), as well as a power transmission line; and concerning the commencement of an EIA pertaining to an energy complex and a detailed zoning plan for the complex. Finland received a notification from Sweden about a windmill park being planned by Finngrunden Offshore AB and its sister company WPD Scandinavia AB in the area of Finngrunden in Selkämeri (Baltic Sea). Finland, among others, received a notification from Lithuania of the commencement of an EIA for the construction of a new nuclear power plant. For a more detailed treatment, see Finland's country report 2007 in the forthcoming *Yearbook of International Environmental Law*.
23. These points of contact are mentioned also for those states that are not (yet) parties to the Espoo Convention in the Espoo Convention website, at <http://www.unece.org/env/eia/points_of_contact.htm>, last accessed 14 April 2008. The points of contact were contacted via email and telephone. The idea was only to gain an indication whether transboundary EAs are rare or more frequent phenomena and to look into the current transboundary EAs, not to study the past procedures. No answer could be obtained from Canada and the

Russian Federation so indeed the enquiry can only give a sense of the number of transboundary EAs pending in the Arctic.

24. The most current transboundary ea procedures are taking place in the North Calotte area. In addition to the Nellim road project transboundary EIA (the case study below), which is in its starting phase, there is a plan to build a phosphate ore mine in Sokli, located in the northeast of Finland, very close to the Russian border. As noted above, Finland notified Russia of this project explicitly on the basis of the Espoo Convention even though Russia is not a party to the convention. There are also two zoning plans to which Finland applies the SEA directive and involves its neighbouring countries, for the Teno River zoning plans and for the mountain–Lapland regional plan. In Kolari and Pajala there is a plan for a joint iron-ore mine, with transboundary EA to be organized on both sides of the border (email communications from the officer from the Regional Environmental Centre of Lapland, Finland, on 19 March 2008, and from the officer of Swedish Environmental Protection Agency on 26 March 2008.)
25. The pipeline project proposed by TransCanada is yet to be approved by the Alaskan legislature. In the past, there have been transboundary procedures related to transboundary effects of mining between Alaska and Yukon (email communication from the manager of the Alaska Operations Office (Oil and Gas sector), part of the Pacific Northwest region of the US Environmental Protection Agency 14 April 2008). For further information about this Alaska highway pipeline project, see <http://www.transcanada.com/company/alaska_highway_pipeline_project.html>, last accessed 14 April 2008.
26. The Dragi SEA is interesting as it aims to apply all applicable international treaties in a very comprehensive manner; see <http://eng.idnadarraduneyti.is/media/Rafraen_afgreidsla/Report_on_oil_exploration-KK.pdf>, last accessed 14 April 2008. Information obtained from the officer of the National Planning Agency of Iceland on 25 March 2008 (email communication). There is also a pending EIA for a coal mining project in Svalbard, although not involving transboundary procedures (email response from officer of the Norwegian Ministry of the Environment, 12 March 2008). Iron-ore mine will be re-opened in Kirkenes, Norway, within a year. The site is located very close to the Russian border, but it is not yet clear whether and in what way Russia will be involved in the EIA procedure.
27. The ACIA Scientific Report was published in 2005 and contains vast information regarding climate change and of its impacts including future prediction with respect to both Arctic and global context (ACIA, 2005).
28. In fact, Norway, the current chair of the Arctic Council (2006–2008), has identified the Arctic EIA Guidelines as one focal area in its Programme for the Norwegian Chairmanship: 'It would be useful to establish a set of operational guidelines for assessing the impact of projects, plans and programmes in the Arctic. If this is done, they should be based on experience and evaluation of national and international guidelines for impact assessments.' The programme can be downloaded from the Arctic Council website at <http://arctic-council.org/article/2007/11/norwegian_programme>, last accessed 14 April 2008.
29. The Saami Council has, for instance, been a very strong actor in trying to persuade Finnish Forestry Board (*Metsähallitus*) to stop logging in traditional Saami reindeer herding areas (Saami Council website: <http://www.saamicouncil.net/?deptid=3754>, last accessed 14 April 2008).

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