Transboundary EIA in the Barents Region

Timo Koivurova, Vladimir Masloboev**, Anna Petrétei***, Vigdis Nygaard**** and Kamrul Hossain******

Abstract

The article examines how transboundary environmental impact assessment (TEIA) is organised in an area where international borders are close to each other, that is, in North Calotte/Kola Peninsula. It shows that a dense set of international legal obligations requires the region's states to undertake TEIA. The paper examines the important question how TEIA can be done in an ideal manner in the region via the available best practise documents, such as the Guidelines for Environmental Impact Assessment in the Arctic document adopted by the predecessor of the Arctic Council, the Arctic Environmental Protection Strategy. Our argument is that best practises can be used in evaluating how individual cases are undertaken, such as the TEIA over the so-called Kaunisvaara project located in Pajala municipality (northern Sweden), close to the Finnish border (chapter 4). Our conclusion is that TEIA should be undertaken by the region's nation-states by applying the main international TEIA convention, the so-called Espoo Convention, but also by adhering to the best practise documents that give guidance how to perform a TEIA in Arctic conditions.

Introduction

In this article, we[1] will examine how transboundary environmental impact assessment (EIA) is regulated within the Barents Region[2], more specifically in the North Calotte/Kola Peninsula and how it could ideally be applied and implemented.[3] Since international borders are in close proximity in this region, it is also important to know how to deal with the adverse impacts of mining that are caused in one nation-state, and harm another. The article will try to identify what a transboundary EIA procedure is, which of the region's nation-states are legally bound to undertake it and the situations that prompt such an undertaking, and what are the main legal requirements that international law lays out for such a procedure. An important goal of the

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[2] The core of the research was conducted under the "Sustainable Mining, Local Communities and Environmental Regulation in Kolarctic Area" (SUMILCERE) project. Among other research questions, the project, funded by the Kolarctic ENPI CBC initiative of the European Union and being run within the period of 2013–2014, focuses on mining and transboundary EIA procedures in the Kolarctic region.

[3] The main focus will be on the northernmost parts of Finland, Sweden and Norway and the Kola Peninsula of the Russian Federation.

article is to examine what are the applicable legal instruments for conducting transboundary EIA within the region, and which of the identified legal requirements are most important to the process. In order to illustrate the aforementioned, a case study is conducted.

Given the particular characteristics of this region as a remote Arctic area, it is of importance to study what guidance is available for conducting best practises in transboundary EIA. We will examine in particular the Guidelines for Environmental Impact Assessment in the Arctic[4] – a document that is particularly well-suited to our case study, given that it provides special guidance for Arctic transboundary EIA. The aim is to demonstrate a means by which we can scrutinize a case study on transboundary EIA, and to determine whether it has been conducted on the basis of business-as-usual, in an ideal manner, or to highlight if the ways in which it has been implemented are amenable to criticism.

1. Introduction to the transboundary EIA procedure

Many are familiar with the environmental impact assessment (EIA) as a nationally regulated procedure for studying the social and environmental impacts of a proposed activity. EIA is different from strategic environmental assessment (SEA) in the sense that EIA applies to proposed projects (like proposed gas pipelines or windmills), whilst SEA is meant to evaluate the impacts of plans, programmes and policies. When the likely impacts of a proposed activity exceed the international border of a state and endanger the environment of another nation-state, then a transboundary EIA has to be carried out.

Normally, nation-states deal with these situations by concluding international treaties that are legally binding on both the origin state (the state within which the proposed activity is to operate), and the affected state (the state which is concerned about the potential adverse impacts from that activity on the other side of the border). The main international convention that applies in the North Calotte/Kola Peninsula area is the 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context, an international convention that was concluded under the auspices of the UN Economic Commission for Europe (ECE). However, there are also other key agreements[5] and applicable conventions.[6] Of the relevant nation-states, Sweden, Finland and Norway are parties to this convention; the Russian Federation has signed the convention but has not yet ratified it. It has however, officially stated at least on one occasion that it is

[4] Guidelines for Environmental Impact Assessment in the Arctic. Available online at: http://www.unece.org/fileadmin/DAM/env/eia/documents/EIAguides/Arctic_EIA_guide.pdf

[5] 2003 Kiev Protocol on Strategic Environmental Assessment, which complemented the Espoo Convention, but has not yet come into force (it has been ratified by only 4 States, whereas 16 are needed), 1992 Helsinki Convention on the Transboundary Effects of Industrial Accidents, 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

[6] General conventions: Article 206 of the 1982 United Nations Convention on the Law of the Sea (Article 206), which is reproduced in 21 I.L.M. 1261 (1982), Article 14 of the 1992 Convention on Biological Diversity, reproduced in 31 I.L.M. 818 (1992). All other specific agreements: The Convention between Norway and Sweden on certain questions relating to the law on watercourses signed in 1929 (and still in force); The 1981 Agreement on a Finnish-Norwegian Frontier Water Commission; Agreements between Finland and Russia are the 1964 Agreement Concerning Frontier Watercourses between Finland and Russia, and the 1992 Action Program Between Finland and the Russian Federation with a view to Reduce Pollution and Implement Water Protection in the Baltic Sea Area as well as Other Areas Near the Border of Finland and Russian Federation; The NEPC (Nordic Environmental Protection Convention between Norway, Sweden, Finland and Denmark); the agreement on common Nordic guidelines on communication concerning the siting of nuclear installations in border areas.

prepared to apply the convention to the extent permitted by its national legislation.[7] Moreover, Finland and Sweden as Member States of the European Union, and Norway as a party to the European Economic Area agreement are legally bound under European law to undertake transboundary EIA.

Nordic cooperation has also played an important role in the transboundary EIA procedure, but it has largely been replaced by later United Nations ECE agreements. These ECE agreements have also been of primary importance in developing European Union EIA and SEA legislation, because the European Community (and now the European Union) has been a Party to all these agreements and later implemented them to become part of European Union Law through its directives.

Hence, if a proposed mining activity is likely to cause transboundary impacts between these three nation-states (e.g. in the northernmost parts of Finland, Sweden and Norway), a transboundary EIA procedure must be organized. Yet, if a mining activity e.g. in the Kola Peninsula is likely to cause transboundary impacts for these nation-states, Russia is not legally obligated to organize such a procedure, although it is of course desirable to have such a procedure in place. In a similar vein, if a mining activity in Finland is likely to cause transboundary impacts for the Russian environment, Finland is not legally obligated under the Espoo Convention to organize a transboundary EIA, even if Finland has notified its policy to treat Russia as if it were a party to the Espoo Convention.[8] It is good to keep in mind that even if this paper addresses only the Espoo Convention as the most relevant transboundary EIA procedure, it may well be that in some cases another convention or directive (between the Nordic states)[9] may require states to conduct such a procedure. It is also important to recognize that transboundary EIA is nowadays a legal requirement under customary international law. Customary international law obligates all nation-states of the world (including the nation-states under scrutiny here) to undertake transboundary EIA, as the International Court of Justice (ICJ) confirmed in the 2010 Pulp Mills Case:

> In this sense, the obligation to protect and preserve, under Article 41 (a) of the Statute, has to be interpreted in accordance with a practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake

[7] A good example of this is Finland's notification a few years ago to the Russian Federation on the basis of the Espoo Convention, regarding a planned mining project in Sokli – located above the Arctic Circle, 12 kilometers from the Russian border – even though Russia is not a party to the Convention. For more information see also: T Koivurova and I Pölönen, 'Transboundary Environmental Impact Assessment in the Case of the Baltic Sea Gas Pipeline' (September 5, 2013) *The International Journal of Marine and Coastal Law* 25 (2010) pp. 151–181. Available at SSRN: http://ssrn.com/abstract=2320989

[8] It is also good to keep in mind that Russia as a signatory to the Convention is required not to frustrate the object and purpose of the treaty as stipulated in the customary law of treaties, and can be expected to become a party to the Convention at a later stage.

[9] For instance, there is the Directive 96/61/EC concerning integrated pollution prevention and control (the IPPC Directive, which is also part of the EEA Agreement). Article 17 regulates on an inter-state transnational EIA procedure where the main emphasis is explicitly on the exchange of information between States based on the permit application procedure. Annex I of this Directive includes a large number of activities hazardous to the environment, far more than were included in the Espoo Convention and the EIA Directive, and which have concentrated on activities that are considered most detrimental to the environment. The transboundary exchange of information between establishments storing dangerous substances is also briefly regulated in the Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances (the Seveso II Directive, Article 13).

> an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.[10]

Yet, the World Court did leave it for states to determine in what way they will carry out transboundary EIA, since it observed that general international law does not specify the scope and content of an environmental impact assessment.[11]

2. How to conduct a transboundary EIA on the basis of the Espoo Convention

As reviewed above, the Espoo Convention is clearly the most important international treaty regulating transboundary EIA, and is also applicable in the North Calotte/Kola Peninsula. According to Appendix I where activities falling under the Espoo Convention are listed, the Convention also applies to mining projects: Appendix I (14) Major quarries, mining, on-site extraction and processing of metal ores or coal.

2.1. What is a transboundary EIA procedure?

Transboundary EIA is a procedure to which foreign nation-states and their nationals are integrated as participants in the national EIA procedure of the origin state. For this reason, Article 2 of the Espoo Convention obliges the Contracting Parties to establish national EIA and permit application procedures with respect to the activities listed in Appendix I (see also Article 2, paragraph 4). The Espoo Convention links the actors in the affected Party – the affected Party and its public – with the functioning of the national EIA procedure of the Party of origin. An affected Party and its public should be informed of an EIA procedure at latest when the Party of origin announces the commencement of an EIA procedure to its own public.

2.2. Starting the procedure

An especially important aspect of the transboundary EIA procedure is the stage at which the Party of origin decides whether the international agreements, and the Espoo Convention in particular, oblige it to put a transboundary EIA procedure into motion. This may sometimes be a matter that a private company considers unfavourable because obtaining a permit for its proposed project may encounter more difficulties, yet an affected Party (a State in whose territory the environmental impacts of the proposed activity are likely to drift) and its public are often opposed to the project being built, especially when they can expect hardly any financial gain from the project (the project also becomes an international matter, which a company frequently does not wish). Thus, as an international legal obligation the transboundary EIA procedure needs to be handled professionally.

The Espoo Convention stipulates that a Party of origin is to implement an EIA procedure:

> For a proposed activity listed in Appendix I that is likely to cause a significant adverse transboundary impact, the Party of origin shall, for the purposes of ensuring adequate and effective consultations under Article 5, notify any Party which it considers may be

[10] See paragraph 204 of the ICJ judgment. Available at: http://www.icj-cij.org/docket/files/135/15877.pdf There is an increasing body of literature on transboundary EIA; see, e.g., the special issue on transboundary EIA, 26 Impact Assessment and Project Appraisal (IAPR) (2008); Theory and Practice of Transboundary Environmental Impact Assessment (2008) K. Bastmeijer, T. Koivurova (eds.) Leiden: Martinus Nijhoff Publishers; N. Craik, The International Law of Environmental Impact Assessment, Process, Substance and Integration (2008) Cambridge, UK: Cambridge University Press. See in general about the transboundary EIA. There are also some studies that look into EIA in general in the Arctic, e.g. T Koivurova, 'Environmental Impact Assessment in the Arctic: A Study of International Legal Norms' (2002) *Ashgate Publishing*.

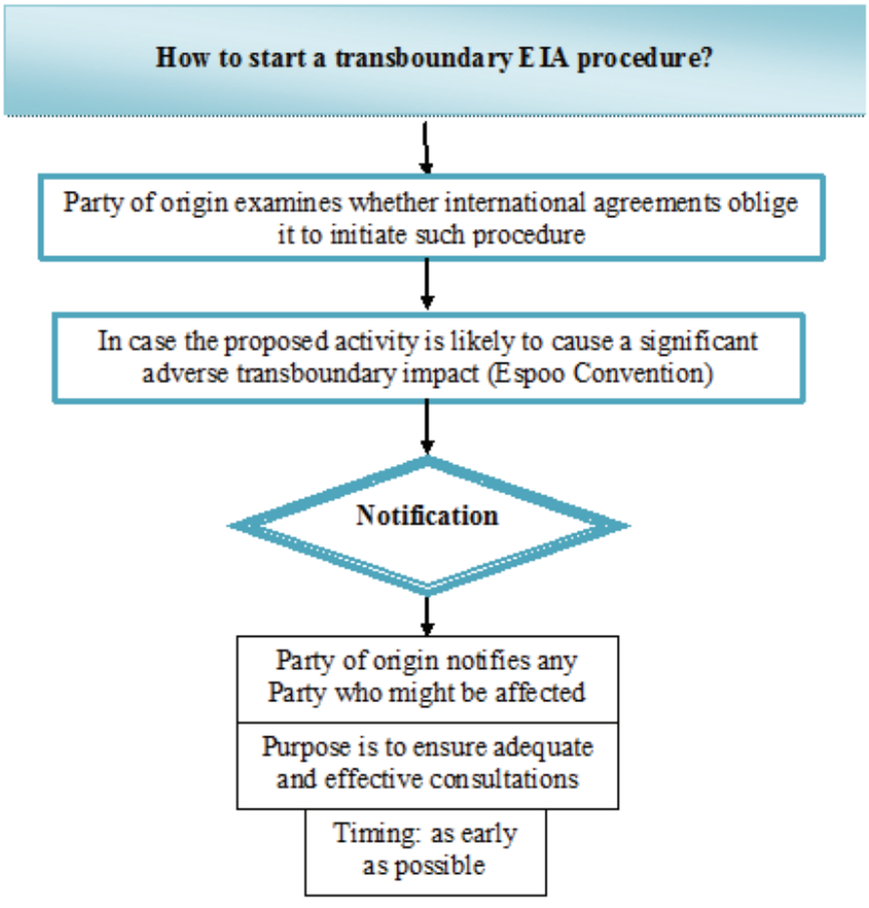
[11] See paragraph 205 of the ICJ judgment. Available at: http://www.icj-cij.org/docket/files/135/15877.pdf

an affected Party as early as possible and no later than when informing its own public about that proposed activity.

The Party of origin is therefore not obliged to implement a transboundary EIA procedure simply on the grounds that the proposed activity is listed in Appendix I; rather, it should also have "likely significant adverse transboundary impacts." The Party of origin therefore has some amount of discretion whether to start the transboundary EIA procedure, especially so because only the terms "transboundary impact" and "impact" are explicitly defined in Article 1 of the Espoo Convention. Moreover, it should be pointed out that the categories of activities listed in Appendix I are, in some aspects open to interpretation. For example, in Finland, mining activities are being planned to an increasing extent in different parts of Lapland, including areas in the proximity of Finland's Norwegian and Swedish borders. Mining activities are one of the categories listed in Appendix I of the Espoo Convention, but this category is comparatively broadly defined: "Major mining, on-site extraction and processing of metal ores or coal" (Appendix 1, item 14). In order to limit this power of discretion, the Espoo Convention includes a so-called Inquiry Commission that investigates whether the Espoo Convention can be applied to a specific proposed activity. In situations where the Party of origin considers that the Convention does not apply, the affected Party can take the Party of origin to Inquiry Commission proceedings, even against its will or in its absence (see Article 3, paragraph 7 and Appendix IV).[12]

To sum up, it can be stated that the Espoo Convention fundamentally applies to the activities listed in Appendix I with the provision that they are likely to cause significant adverse transboundary environmental impacts. If the Parties so agree, the Espoo Convention can also be applied to activities other than those listed in Appendix I which are likely to cause significant adverse transboundary impacts. Moreover, in terms of procedure, a difference lies in whether the proposed activity is listed in Appendix I or not, and the Inquiry Commission is only applicable to activities listed in Appendix I. Good practice would be that states would always informally discuss any proposed activities that may have transboundary impacts, and commence a transboundary EIA if required by the potentially affected state. This communication between states and provinces can take place via the different inter-governmental bodies these nation-states belong to, e.g. the Barents Euro-Arctic Region (with its Council), the Barents Regional Council, or in Nordic co-operation.

[12] What happens when the proposed activity is not listed in Appendix I? In this case, the Espoo Convention can be applied in such instances where: a) it is likely to cause significant adverse transboundary impacts, and b) the Parties are agreed that for this reason, the Espoo Convention should be applied to the activity. Appendix III provides guidelines when deciding whether to apply the Espoo Convention to the proposed activity if it does not appear in Appendix I. Such criteria include the size of the proposed activity, its location and impacts. In such instances, the Inquiry Commission cannot be used. The Espoo Convention therefore leaves much to the discretion of the Party of origin as to whether to implement a transboundary EIA procedure. The decision of the Inquiry Commission is just a recommendation, even if its de facto effect may be far-reaching. It is interesting that all three States – Finland, Sweden and Norway – have made declarations under Article 36, paragraph 2 of the Statute of the UN International Court of Justice, which means that any of these States can institute proceedings against another in this court of law (including such cases where, in the view of the affected Party, the Party of origin does not comply with the Espoo Convention in its refusal to implement a transboundary EIA procedure).



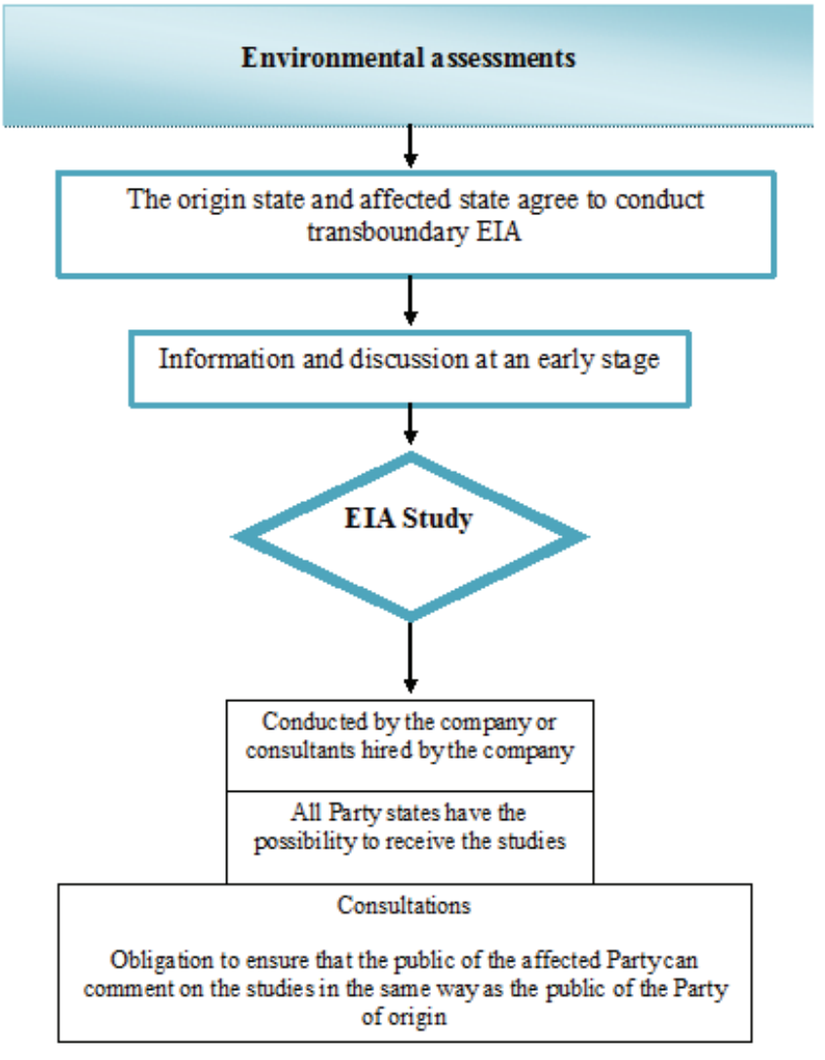
2.3. Conducting environmental assessments in a transboundary context

When the origin state and the affected state agree to conduct a transboundary EIA, there will need to be a transmission of information from the origin to the affected state and its public – much in the same way than the origin state's own public receives information about the proposed activity. If the origin state's EIA includes a scoping procedure (a separate stage of an EIA where the decision is made with the assistance of the public and the competent authorities, as to what should be studied in the EIA), then the origin state needs to start the procedure very early on and involve the affected state and its public in discussions on what should be examined.[13] This is normally a very important stage from the viewpoint of the affected state and its public, as they want the mining company and the possible consultants it has hired to examine the impacts the planned activity will have on the other side of the border. Yet, if the origin state's EIA does not include a scoping procedure, then authorities need to make sure that environmental studies take into consideration impacts on the other side of the border. In fact, the Convention requires the Party of origin to request assistance from the affected Party when conducting environmental studies, if further information is necessary. Under normal circumstances, it is difficult to justify why

[13] The Convention calls for the Contracting Parties to arrange the participation of the public of the affected Party in the scoping procedure under the same terms and conditions by which the public of the Party of origin are able to participate (Article 3, paragraph 8). The affected Party may also present its position in the scoping procedure.

the Party of origin should not ask for such assistance from the affected Party, in instances where the environmental impacts have a direct effect on the environment in the affected Party territory. In such instances, the information it provides about its own environment is an important additional assessment of the overall impacts from the proposed activity. The affected Party is also obliged to provide "reasonably obtainable information" if the Party of origin so requests (Article 3, paragraph 6).

After the company or the consultants that it has hired, has finalized the environmental and social impact assessments all parties (including foreign bodies) have the opportunity to receive the studies (the results of which are prepared in a way that is understandable for a lay audience). The public of the affected Party and the affected Party also retain the right to have a say in the environmental studies. The Party of origin and the affected Party are both obliged to ensure that the public of the affected Party are able to comment on the environmental studies in the same way as the public of the Party of origin. The Party of origin is required to arrange consultations with the affected Party based on the environmental studies, and the parties can raise various matters in the consultation, such as those concerning possible alternatives for the proposed activity (Article 5).



2.4. Final decision

The Party of origin should "take due account" (Article 6, paragraph 1) of the views of the affected Party and its public in its final decision-making. The Party of origin should also provide the affected Party with the final decision on the permit application. The Convention does not oblige an affected Party to provide the decision to its public,[14] although this should naturally take place in cases where its public has participated in a transboundary EIA procedure. The Espoo Convention also includes the possibility for Contracting Parties to arrange a post-project analysis of the environmental impacts, but there is no legal obligation to do so. If the states are serious about following up on whether any transboundary impacts ensue from the activity however, they should engage in post-project analysis.

3. How Transboundary Environmental Impact Assessment should be conducted in the Arctic context

Given that the North Calotte/Kola Peninsula are considered to be Arctic areas, it is of importance that the eight Arctic nation-states (Finland, Sweden, Norway, Iceland, Denmark, the United States, the Russian Federation and Canada) were able to provide guidance on how to conduct EIA in general, and transboundary EIA in particular, in the vulnerable and very unique conditions of the Arctic. In this chapter, we will mostly study what kind of good practises the Guidelines[15] recommend, but we will also study these recommendations in light of what the leading association, the International Association for Impact Assessment (IAIA), has provided in the way of how to improve the way transboundary EIA is undertaken. Based on these two recommendatory documents, we have collated suggestions that would help to carry out transboundary EIA procedures in a more effective and equitable manner.[16]

In the 1997 Alta Declaration, the Arctic states agreed to apply the 1997 EIA Guidelines,[17] which contain a separate chapter on transboundary impacts that specifically mentions the Espoo Convention.[18] At the time, there were great prospects of having the Espoo Convention become a pan-Arctic Convention, which partly inspired the making of these Guidelines, given that the Espoo Convention not only regulates transboundary EIA, but sets out certain minimum requirements for national EIA's. In the introduction, the legal nature of these EIA Guidelines is clarified:

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[14] Here, the EIA Directive goes a step further because it requires that: the comments of the affected State and its public "must be taken into consideration" in final decision-making (Article 8); that the State of origin must send to the affected State a more detailed report of the manner in which these views were taken into consideration in final decision-making; and also, that the public of the affected State is informed of the final decision (Article 9, paragraph 2).

[15] Guidelines for Environmental Impact Assessment in the Arctic. Available online at: http://www.unece.org/fileadmin/DAM/env/eia/documents/EIAguides/Arctic_EIA_guide.pdf

[16] The tips are available online on the webpage of the IAIA: http://www.iaia.org/publications-resources/fastips.aspx

[17] What are Guidelines for Environmental Impact Assessment in the Arctic? The guidelines were adopted by the ministers of the Arctic Countries in their Alta Declaration of 1997. It is an instrument to disseminate information on Arctic EIA activities. The aim is to give practical guidance for environmental assessments to all parties involved in development activities in the northern circumpolar areas, but especially to local authorities, developers and local people. The document raises issues that are unique to Arctic assessments, for example the issue of permafrost. Universal issues that are particularly important in the Arctic are also emphasized, for example public participation and the use of traditional knowledge.

[18] 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'.

> 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.[19]

The Guidelines provide important guidance as to how EIA should be conducted to give due consideration of the special conditions in the Arctic, some examples of which will be given here. The drafting of the instrument was prompted by the realisation that the Arctic states share many challenges in applying EIA in their Arctic areas. For example, the participation of the public in EIA is constrained by the region's small population which includes many indigenous peoples. The long distances and limited number of cities and towns also affect how public participation is organised. 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 EIA procedures. As all of the Arctic states are signatories to the Espoo Convention (and five of them as parties), the Guidelines are meant to adjust the requirements of the Convention to the Arctic context. Above all, the Guidelines instrument urges that all activities assessed according to national EIA legislation should also be screened from the viewpoint of whether any transboundary impacts are likely.[20] Thus, all activities to which a national EIA 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 they are proposed to operate in Arctic conditions.[21]

According to the Guidelines, the origin state should initiate the transboundary EIA procedure at a very early phase of its national EIA procedure. The Guidelines document recommends that already in the scoping phase of the national EIA procedure, potential transboundary impacts should be identified and the methods to be used for their assessment should be agreed upon between the concerned states – joint steering groups are recommended to perform these tasks.[22] The Guidelines also urge cooperation in the implementation of transboundary EIA procedures taking place in the Arctic.[23] This is also taken up in the IAIA guidance, which expresses that it is advisable to start thinking of mitigation measures already at an early stage.

The Espoo Convention provides for a basic right for all 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 urges the Arctic states to be as inclusive as possible when organising a transboundary EIA procedure: 'Communities in the area of antici-

[19] See the Guidelines at http://arcticcentre.ulapland.fi/aria/procedures/eiaguide.pdf (2.10.2014).

[20] Paragraph 8 of chapter 11 of the EIA Guidelines.
[21] Ibid.
[22] Ibid., para. 4.
[23] Ibid., paras. 7 and 8.

pated impacts should be given an opportunity to participate, irrespective of their location relative to the border'[24]. According to IAIA Guidance, it is important to ensure that the transboundary EIA report positively contributes not only to the environment, but also to the well-being of local inhabitants. The IAIA Guidance places a lot of emphasis on transparency, participation and the engagement of all relevant stakeholders in the process.

In the Arctic context, these local inhabitants are often indigenous peoples, as referred to in chapter 11 of the Guidelines.[25] This is also emphasized in the IAIA transboundary EIA best practices. According to IAIA, local and indigenous knowledge is relevant and important. Therefore, it is strongly suggested to include it in the transboundary EIA process. Involving traditional knowledge and local cultural practices is not only essential for gaining trust, but can also be beneficial for the transboundary EIA study. The Guidelines document also emphasises that even though activities may be far away from the border, transboundary impacts may anyway occur, especially with respect to large-scale activities such as mining activities.[26]

4. Case-study

The function of a case study in this article is to demonstrate one way of analysing whether Arctic transboundary EIA procedures are conducted in a good manner. As stated above, we will examine the case from the viewpoint of those aspects which can be seen as best practises and those that cannot – and whether there are aspects of the transboundary EIA case study that can be criticized.

We have chosen the only case where a mining activity has gone through a full transboundary EIA procedure, involving the Tapuli and Sahavaara mines, the so-called Kaunisvaara project (see below). It is of interest to note that there are also pending mining transboundary EIA's (e.g. the Sydvaranger mine, located in the border town of Kirkenes, with possible transboundary impacts to both Finland and the Russian Federation), and likely forthcoming mining transboundary EIA's (e.g. Sokli, located in Savukoski in Lapland, 12 kilometres from the Russian border) in the region we have examined.

Our case is the overall development of mining operations by the Northland Resources AB (henceforth, Northland Resources) regarding the Tapuli mine and the planned Sahavaara[27] mine (the so-called Kaunisvaara project located in Kaunisvaara, Pajala[28]). The mine area is set approximately 10 km from the Finnish border, partly in a large swamp area. In total, the future Kaunisvaara project mine area including the planned Sahavaara mine will cover an area of 3,000 ha, which is 0.5 % of the area of the Pajala municipality.[29] Initially the company planned to take the iron ore by trucks to the Finnish side for further transportation by railway to the Gulf of Bothnia, but finally relinquished this plan in favour of an alternative route.

Northland Resources mines magnetite ore in an open pit. The company has a budget to pro-

[24] Ibid., para 10.
[25] Ibid. 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.'
[26] Ibid., para. 9.
[27] Sahavaara means "The sawmill mountain".
[28] Kaunisvaara means "The beautiful mountain".
[29] The Tapuli mine is an operating mine in the area, while the Sahavaara mine is currently in the planning phase.

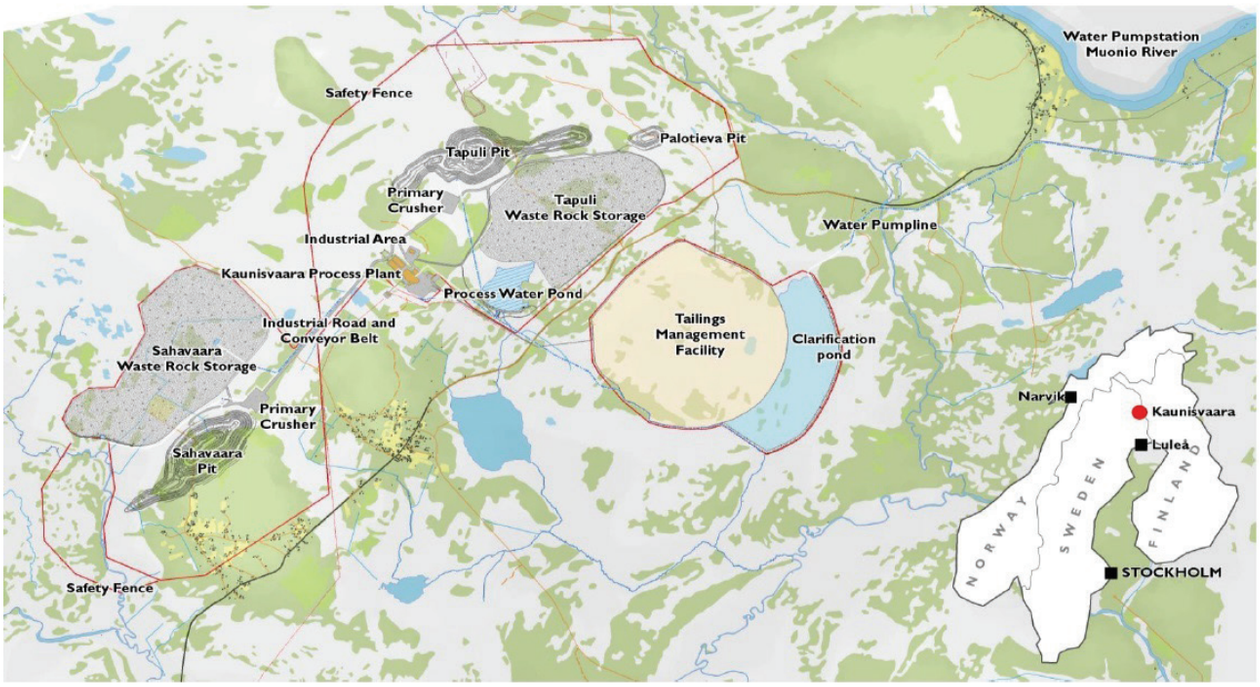
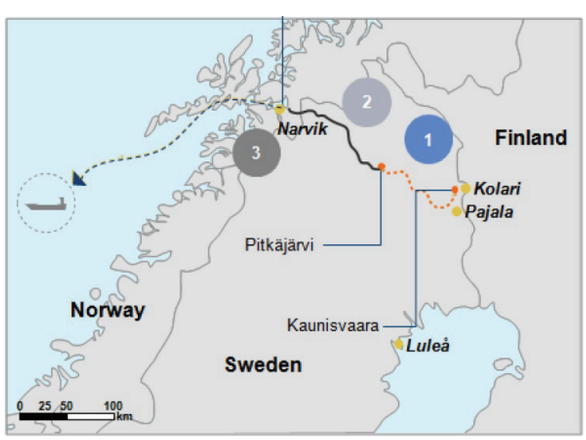


Illustration of the Kaunisvaara project mine area with the existing Tapuli mine and the future Sahavaara mine, each with waste rock storages, located in Pajala municipality (northern Sweden). The figure also illustrates the tailings management facility, clarification pond, process water pond, industrial area, process plant, water pump and effluent discharge station in the Muonio River etc. Figure courtesy of Northland Resources.

duce 1.7 million tons of iron concentrate during 2014, while the mill is designed for a capacity of 5 million tons of concentrate per year at full production rate. The concentrate is of high quality, with a 69 % iron content. In the summer of 2014, there were an approximate total of 300 employees in the Kaunisvaara project.

The iron concentrate is transported from the mine to Pitkäjärvi by highway trucks. Each truck transports 63 tons of iron concentrate. From Pitkäjärvi, the iron concentrate is transported to Narvik (Norway) by train. In Narvik, the iron concentrate is shipped out to customers around the world in vessels of cape size.



The iron concentrate is transported from the Kaunisvaara mine to Pitkäjärvi by truck (1). From Pitkäjärvi the iron concentrate is transported to Narvik harbour by train (2). From Narvik harbour the product is shipped out to costumers (3).

Figure courtesy of Northland Resources.

4.1. Transboundary EIA procedure

Northland Resources plans to begin iron ore mining activities at Sahavaara in the Pajala municipality in Northern Sweden. As part of the list of activities in Annex III to the Environmental Ordinance[30] that are likely to have significant environmental impacts, Northland Resources had to undergo an environmental impact assessment of the project.[31] As it was likely that the Sahavaara project would have significant environmental impacts in Finland, Sweden applied the Espoo Convention[32] regime as transposed into Swedish national law.[33] The Convention bases its regime on national EIA procedures, so the process of the Sahavaara mine transboundary EIA took place according to the sections of the Swedish Environmental Code, which governs national and transboundary EIA procedures.[34]

Pursuant to section 4.1 of chapter 6 of the Environmental Code, the developer informs the county administrative board of a project that is likely to have adverse environmental impacts.[35] The country administrative board shall then decide if the activity is likely to have a significant environmental impact, as laid down in section 4.3. However, section 4.4 states that the Government may specify activities and measures that are always likely to have a significant environmental impact. Mining industry has been specified as one of these activities in the EIA Ordinance to the Environmental Code.[36]

Pursuant to the abovementioned sections, Northland Resources was planning to consult the Norrbotten County Board, the Pajala Municipality, the Fiskverket fishing facility and the Muonio Sami village.[37] In addition, the developer planned to have public hearings in Sweden and in Kolari, Finland for landowners, associations, organisations and hunting societies.[38]

Pursuant to section 5 of chapter 6, following the county administrative board's decision that the project is likely to have significant environmental impacts, an environmental impact assessment is to be held. The county administrative board shall also forward the information to the Swedish Environmental Protection Agency (henceforth, SEPA), which is in charge of contacting the authorities in the state likely to be affected, should the project have significant

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[30] Förordning om ändring i förordningen (1998:905) om miljökonsekvensbeskrivningar, 12 May 2006.

[31] Annex III contains a section of 'Utvinningsindustri' (Mining industry). Mining industry is always assumed to have significant environmental impacts according to the Ordinance.

[32] The Convention on Environmental Impact Assessment in a Transboundary Context, 25 February 1991, United Nations Treaty Series, vol. 1989, p. 309.

[33] Section 6, chapter 6 of the Environmental Code states "if an activity or measure is likely to have a significant environmental impact in another country, the responsible authority designated by the Government shall inform the competent authority in that country about the planned activity or measure and give the country concerned and the citizens who are affected the opportunity to take part in a consultation procedure concerning the application and the environmental impact assessment".

[34] Chapter 6 of the Environmental Code governs the EIA procedures. The EIA Ordinance provides for some detailed statutes.

[35] Section 4.1 reads "Persons who intend to pursue an activity or take a measure for which a permit or decision concerning permissibility is required pursuant to this Code or to rules issued in pursuance thereof shall consult the county administrative board at an early stage. They shall also consult private individuals who are likely to be affected and must do so in good time and to an appropriate extent before submitting an application for a permit and preparing the environmental impact statement that is required in accordance with section 1. Prior to consultation, a person who intends to pursue an activity shall submit information about the location, extent and nature of the planned activity and its anticipated environmental impact to the county administrative board and any private individuals affected."

[36] See "Bilaga 3 Förordning om ändring i förordningen (1998:905) om miljökonsekvensbeskrivningar, 12 May 2006".

[37] Northland Resources AB, Alustava asiakirja koskien kaivostoimintaa Sahavaarassa, Pajalan kunnassa. Northland Resources Inc. 11 November 2009, p. 4.

[38] Ibid., p. 4.

transboundary environmental impacts. Pursuant to section 6 and the non-discrimination principle laid down in the Espoo Convention article 2(6)[39], if the project is likely to have significant transboundary environmental impacts, the affected country and its citizens must be granted the opportunity to take part in the consultations and the EIA procedure.

Accordingly, on 4 December 2009, SEPA (the point of contact and focal point for Sweden in transboundary environmental impact issues as decided by the first meeting of the parties to the Convention) contacted the Finnish Ministry of the Environment to notify them of the project.[40] This notification was also in line with article 3(1) of the Espoo Convention.[41] Pursuant to article 3(2) of the Convention, the notification must contain information of the proposed activity and available information of its transboundary impacts, the nature of the possible decision and an indication of the time within which a response is expected.

The notification sent to the Finnish Ministry of the Environment contained information in line with the requirements laid down in article 3(2). SEPA first summarized the project and then explained the Swedish regime regarding EIA. Information was then provided about meetings that had already taken place with the municipalities regarding consultations and the content of the environmental impact assessment. Lastly, SEPA requested the Ministry of the Environment to reply at the latest by 29 January 2010. The reply should entail information of confirmation of the receipt of the notification, a decision as to whether Finland will participate in the environmental impact assessment, comments on what the environmental impact assessment should contain, and comments from the public in Finland. Sweden has a gentlemen's agreement with the Nordic countries that the affected party will handle the responsibility of the public consultations in that country, and therefore SEPA was not involved in the process on the Finnish side.[42]

Following the notification by SEPA, the Finnish Ministry of the Environment sent out a request for statements and comments on the 17 December 2009.[43] These were due by 27 January 2010.

The reply by the Finnish Ministry of the Environment was delayed by a few days, but sent to SEPA on 5 February 2010.[44] This did not pose a problem as there is no legal time frame for a reply in the Swedish EIA regime. Furthermore, in a questionnaire sent out to the parties to the Espoo Convention, the Swedish attitude towards delays in replies was very lenient.[45] The reply contained statements from, inter alia, the National Board

[39] According to the principle, the public of the State that is likely to be affected must be given an opportunity to participate in the studies of the impacts in a similar manner to that of the public of the origin. See Pölönen and Koivurova, 'Rajat ylittävä ympäristövaikutteiden arviointi – vaihtoehtotarkastelun riittävyys ja suhde lupapäätöksentekoon', Lakimies (3) (2009), p. 373.

[40] Ruotsin ympäristöviranomaisen 4.12.2009 päivätty ilmoitus kaivoshankkeesta Sahavaaraan Pajalan kuntaan, Ympäristövaikutusten arviointimenettely, Ympäristöministeriö available at: http://www.ym.fi/fi-FI/Kansainvalinen_yhteistyo/Ymparistovaikutusten_arviointi/Sahavaaran_kaivoshanke_Pajalassa%283622%29 (15. 09. 2014)

[41] According to article 3(1) of the Espoo Convention, the country of origin must notify the affected party of the proposed activity (listed in Annex I of the Convention) that might cause adverse transboundary impacts.

[42] Information given by Egon Enocksson from SEPA by e-mail.

[43] Ympäristöministeriön lausuntopyyntö Sahavaaraan suunnitteilla olevasta rautakaivoshankkeesta, Ympäristövaikutusten arviointimenettely, Ympäristöministeriö. Available at: http://www.ym.fi/fi-FI/Kansainvalinen_yhteistyo/Ymparistovaikutusten_arviointi/Sahavaaran_kaivoshanke_Pajalassa%283622%29, (15. 09. 2014)

[44] Ympäristöministeriön vastaus Ruotsin ympäristöviranomaiselle Sahavaaraan Pajalan kuntaan suunnitteilla olevasta kaivoshankkeesta, available at: file:///C:/Users/u1401489/Downloads/Sahavaara_svar_FINAL_100205.pdf (06. 10. 2014)

[45] See S Jerdenius, 'Report of Sweden on the Implementation of the Convention on Environmental Impact Assess-

of Antiquities, the Provincial Office of Lapland, and the cities of Kemi and Tornio.[46] The Finnish Ministry of the Environment stated that based on the statements and opinions received from the parties and its own views, Finland would participate in the EIA process. Furthermore, the Ministry stated that Finland perceives the project likely to have significant transboundary environmental impacts on watercourses.

In their reply, the Ministry of the Environment pointed out several topics for the EIA. The Ministry indicated, for example, that in the materials to be assessed an alternative route for how the materials would be transported from the mine was not presented. The Ministry considered that the EIA should entail a section detailing alternative transport routes[47] in Sweden compared with those in Finnish territory.[48] Furthermore, the Ministry of the Environment stated that the significant adverse environmental impacts of the project could also include effects on fishing and reindeer herding.

Following the Ministry's views on the EIA procedure, a summary of the statements collected from the different entities was provided. These statements included, inter alia, the National Board of Antiquities' concerns over the effects of the project on Finland's archaeological heritage, and the Regional Council of Lapland's wishes that the EIA statement include a separate section for the impacts on Finland.[49] Some calls were made in the statements to study the environmental impacts of the mine projects jointly and not separately.[50]

After public opinions and statements were collected from the Finnish entities, they were sent back to SEPA in Sweden. Pursuant to section 7 of the Swedish Environmental Code, after the statements and comments were collected from necessary entities, the developer began to conduct the EIA. Following the requirements set out in section 7 of the Environmental Code, the developer had to include, inter alia, a description and details of the activity, and information needed to assess the effect on the environment.

4.2. Joint EIA statement on the Tapuli and Sahavaara mines

The EIS document was published in June 2011 by Northlands Resources.[51] Northland Resources made a joint EIS for the effects of the Tapuli and Sahavaara mines (and the concentrator). The joint EIS was made to provide a full picture of the environmental effects of the Pajala mine. The joint EIS is also supposed to form the groundwork for one comprehensive permit for the overall Kaunisvaara mining development. The document was translated into Finnish as well, although the Espoo Convention does not set requirements for translations. However, the Swedish authorities usually discuss documents to translate with the developer. According to

ment in a Transboundary Context' (2010) *United Nations Economic Commission for Europe*, p. 5 (Question 11).

[46] For a completele list, please see: Ympäristöministeriön vastaus Ruotsin ympäristöviranomaiselle Sahavaaraan Pajalan kuntaan suunnitteilla olevasta kaivoshankkeesta, Ympäristövaikutusten arviointimenettely, Ympäristöministeriö. Available at: http://www.ym.fi/fi-FI/Kansainvalinen_yhteistyo/Ymparistovaikutusten_arviointi/Sahavaaran_kaivoshanke_Pajalassa%283622%29 (15. 09. 2014) p. 1. (Available in Swedish)

[47] According to the plans, the transportation of iron ore concentrate was destined to Äkäsjokisuu Kolari in Finland for further transportation by rail to Ajos harbour in Kemi, from where it would have been transported overseas.

[48] See ibid., p. 2.

[49] See Ibid., p. 7.

[50] See for example, the statement of the Regional Council of Lapland.

[51] Northland, 'Ympäristövaikutusten arviointi: Kaunisvaaran kaivostoiminta, Sahavaaran ja Tapulin kaivokset sekä Kaunisvaaran rikastamo'. Lupinus, Luulaja 2011. Available at: http://www.ym.fi/fi-FI/Kansainvalinen_yhteistyo/Ymparistovaikutusten_arviointi/Sahavaaran_kaivoshanke_Pajalassa%283622%29 (17. 09. 2014).

Sweden, it is up to the developer to translate sufficient parts of the notification and the EIA.[52]

Northlands Resources discussed the environmental impacts from multiple aspects.[53] These included, for example, the effects on the view and scenery (a change will occur during the mining activities, but the permanent impact will be minor); the water system (although a swamp will be drained, the assessment was that there would be no impact on the environmental quality standards regarding the waters); and disturbances such as noise and air pressure waves (Northlands Resources concluded that some estates would have to be redeemed due to their location within the security perimeter of the Sahavaara mine, and that for the villagers of Kaunisvaara the project would entail an increased noise level). In addition, Northlands Resources compared the negative impacts on the environment with the positive impacts of the project (such as increased employment rate, improved infrastructure and municipal tax revenue) and concluded that the positive impacts outweighed the negative ones.[54]

After the EIS is concluded, notification thereof shall be published pursuant to section 8 of the Swedish Environmental Code, chapter 6. This statement has to be made available to the public, which shall be given an opportunity to comment on the statement before permits are granted.

This notification was performed by Sweden (SEPA) as regards the Kaunisvaara project mining activities, and received by the Finnish Ministry of the Environment on the 15 November 2012.[55] The deadline for comments was set for 10 January 2013. Some changes had been made to the plans of the mining complex. For example, the transportation of mining extract would no longer take place on the Finnish side of the border, but would be taken from Kaunisvaara by railroad to Svappavaara, and onward to Narvik harbour in Norway.

On 26 November 2012, the Ministry of the Environment submitted a request for comments on the environmental impact statement.[56] The Ministry specified that the previous Sahavaara application had been supplemented with further requests for concentrator facilities and the alternate route for exportation of the mining extract.

On 17 January 2013, the Ministry of the Environment sent a response to SEPA regarding the EIA statement.[57] The Ministry underlined the importance that the project's environmental impacts be assessed as a whole, which would provide the best means to minimise and mitigate the adverse impacts of the project. In addition, the response included the comments received from; inter alia, the Lappish ELY Centre[58] and

[52] See, Sten Jerdenius, Report of Sweden on the Implementation of the Convention on Environmental Impact Assessment in a Transboundary Context, United Nations Economic Commission for Europe, 2013, p. 10.

[53] Northland, 'Ympäristövaikutusten arviointi: Kaunisvaaran kaivostoiminta, Sahavaaran ja Tapulin kaivokset sekä Kaunisvaaran rikastamo'. Lupinus, Luulaja 2011. Available at: http://www.ym.fi/fi-FI/Kansainvalinen_yhteistyo/Ymparistovaikutusten_arviointi/Sahavaaran_kaivoshanke_Pajalassa%283622%29 (17. 09. 2014), pp. 8–14.

[54] Ibid., p. 15.

[55] Ruotsin ympäristöviranomaisen 15.11.2012 päivätty ilmoitus kaivoshankkeesta Kaunisvaaraan Pajalan kuntaan, available at: file:///C:/Users/u1401489/Downloads/Ruotsin%20ymp%C3%A4rist%C3%B6viranomaisen%2015.11.2012%20p%C3%A4iv%C3%A4tty%20ilmoitus%20(2).pdf (06. 10. 2014)

[56] Ympäristöministeriön lausuntopyyntö Kaunisvaara-Sahavaaran kaivoshankkeen YVA-menettelyn arviointiselostuksesta, available at: file:///C:/Users/u1401489/Downloads/lausuntopyynt%C3%B6%20Kaunisvaara-Sahavaara%20YVA%20(2).pdf (06. 10. 2014)

[57] Ympäristöministeriön vastaus Kaunisvaara-Sahavaaran kaivoshankkeen ympäristövaikutusten arviointiselostuksesta, available at: file:///C:/Users/u1401489/Downloads/Ymp%C3%A4rist%C3%B6ministeri%C3%B6n%20vastaus%20Kaunisvaara-Sahavaaran%20kaivoshankkeen%20ymp%C3%A4rist%C3%B6vaikutusten%20arviointiselostuksesta%20(1).pdf (06. 10. 2014)

[58] Centre for Economic Development, Transport and the Environment (Elinkeino-, liikenne- ja ympäristökeskus)

the Reindeer Herding Association.[59] The ELY Centre raised concerns that the amount of drainage water would be more significant than was assessed in the EIA statement of 2011. Therefore the ELY Centre raised issues and requirements that should be considered in the licensing process regarding the waste water. These included, inter alia, extensively investigating the properties of the sulphur tailings arising from flotation and production-related variations, and controlling the effects of the mining activities on the fish stock and fisheries in a way approved by both the Swedish fish authorities and the ELY Centre.

The Reindeer Herding Association on the other hand, stated that the project caused a loss of pasture for the Muonio Sami village. The Association continued that other indirect losses may occur as the reindeer move to pasture in other areas as a result of the disturbances. The Association further stated that eventually an enclosure would have to be built to prevent the mixing of Finnish and Swedish reindeer caused by the mining activities.

4.3. Analysis

It seems first of all obvious that in most aspects, the two states, Finland and Sweden, have conducted themselves on the basis of the applicable international convention, the Espoo Convention. This is also the Convention on which the Guidelines for EIA in the Arctic are founded, in its chapter 11.

There are several examples of best practices. The Guidelines document prescribes that "[o]pen dialogue and information exchange should be established between the country of origin and the affected country or countries", which is clearly the case here.

Perhaps more importantly, chapter 11 of the Guidelines provides:

> In the EIA process, possible transboundary impacts should be considered, when appropriate. Assessments of transboundary impacts require project developers and authorities to make allowances for different legal systems, to provide translations when necessary, and to make special arrangements for public participation across jurisdictional borders.[60]

As studied above, when Sweden made a joint EIS over the Kaunisvaara mining project developments, and the document was translated into Finnish, even though the Espoo Convention does not set requirements for such translations. Additionally, the Guidelines document urges special arrangements for public participation across jurisdictional borders. Sweden has a gentlemen's agreement with the Nordic countries that the affected party will handle the responsibility of the public consultations in that country, and therefore SEPA was not involved in the process on the Finnish side. This type of gentlemen's agreement clarifies responsibilities in transboundary EIA and is clearly a good practice. Overall, the public participation on both sides of the border was handled well, and also involved indigenous reindeer herders.

One particular best practice is the way that Sweden, upon request of Finland, carried out a joint environmental impact statement concerning the Kaunisvaara mining developments. As provided in the Guidelines document:

> It is important to describe and analyze the accumulation of change to the environment due to project related impacts, even though the projects may be small and their impacts minor … Cumulative impact assessment at the project level, along with an understand-

[59] See ibid. pp. 2–3.

[60] See page 39 of the Guidelines, at http://arcticcentre.ulapland.fi/aria/procedures/eiaguide.pdf

> ing of environmental impacts at the resource and land use planning level, helps set that project and its impacts in a broader ecological and development context.[61]

The provision by Sweden of a joint EIS of the Kaunisvaara mining developments also provided a full picture of the environmental effects of the Pajala mine to Finland. In this way, Finland was able to provide comments on the overall environmental pressures from the Finnish perspective.

As the case study involved neighbours with good relations and long-standing experiences of conducting transboundary EIA's, there are only some issues that might be discussed in a critical vein, given that the procedure was clearly handled in accordance with the Espoo Convention. One issue on which the two states could have placed more emphasis is how to better involve indigenous peoples organizations, as is encouraged in the Guidelines document:

> Communities in the area of anticipated impacts should be given an opportunity to participate, irrespective of their location relative to the border. The Inuit Circumpolar Conference, the Sami Council and the Indigenous Peoples Secretariat are accredited non-governmental organisations 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.[62]

In the case-study, some reindeer herding associations were involved, but perhaps the Saami Council could also have had a role in conveying the overall views of Sami in general and reindeer herding Sami in particular, also taking into account that the same company is planning mining activities (the Hannukainen mine) also on the Finnish side of the border.

5. Conclusions

The Barents region in general and the North Calotte/Kola Peninsula are in the process of deep transformation. Climate change and especially economic globalization have opened up the region's plentiful resources for global consumption. The mining industry has migrated northwards, and even if the current global market prices of many minerals cause problems for the mining industry, it seems clear that in the long-run the demand for mineral resources from the Arctic regions will stay at a high level. With a projected 12 billion people on our planet by the end of the century, and most of the population growth stems from Asia where people want to raise their living standards very quickly, it seems obvious that mining industry will progress in the Barents region.

In order to sustain this development, we need to have strong environmental protection machinery, which includes EIA over planned mining developments. Since the international boundaries of the North Calotte/Kola Peninsula are very close to each other, it is important to know the international legal requirements for these very complex EIA's. Moreover, as has also been studied in this article, it is important to take into account the particular characteristics of the Barents and Arctic regions. The Guidelines for Environmental Impact Assessment in the Arctic, and the more general IAIA Guidance, provide important recommendations how to conduct more effective and equitable transboundary EIA in this region. Additionally, this case study demonstrates ways of conducting transboundary EIA in the North Calotte/Kola Peninsula region.

[61] See the special chapter on cumulative impacts in the Guidelines document at 5.2., at http://arcticcentre.ulapland.fi/aria/procedures/eiaguide.pdf

[62] Ibid, p. 41.

Because Norway, Sweden and Finland are Contracting Parties to the Espoo Convention and because the Espoo Convention provides more detailed regulations on transboundary EIA, it provides the best foundation for conducting a transboundary EIA in the North Calotte/Kola Peninsula area. Moreover, the Russian Federation has indicated that it is willing to observe the Convention to the extent permitted by its own national legislation, even if it is not yet a party to the Convention.[63] Hence, the Espoo Convention should be used as the backbone of the transboundary EIA system in the North Calotte/Kola Peninsula as regards proposed mining activities, and additionally, the IAIA and the Arctic EIA Guidelines also provide important recommendations for conducting a transboundary EIA in the region.

[63] It may well be that the Espoo Convention will soon be ratified by the Russian Federation, given that in recent years it has been reported that this may happen soon.