Transboundary Environmental Governance

Inland, Coastal and Marine Perspectives

Edited by

ROBIN WARNER
University of Wollongong, Australia

SIMON MARSDEN
Flinders University, Australia

ASHGATE

Chapter 13

Could the Espoo Convention Become a Global Regime for Environmental Impact Assessment and Strategic Environmental Assessment?

Timo Koivurova*

Introduction

The Convention on Environmental Impact Assessment (EIA) in a Transboundary Context (the Espoo Convention) is now 20 years old.[1] It was negotiated under the auspices of the United Nations Economic Commission for Europe (UNECE) and signed in Espoo, Finland, in 1991.[2] Following six meetings of the signatories, the Convention entered into force in 1997 and the first meeting of the parties (MoP) took place in Oslo in 1998. Four MoPs have been held since, at approximately

* The author would like to thank Professor Simon Marsden for his encouragement to think beyond the existing transboundary environmental impact assessments. The article is based on a keynote the author made in the seminar organized by the Australian National Centre for Ocean Resources and Security, University of Wollongong, NSW titled 'Perspectives on Transboundary Environmental Governance in Australia and Beyond'. Part of the research for this article was done during the time the author was a visiting professorial fellow in the Faculty of Law of the University of New South Wales.

1 The Convention on Environmental Impact Assessment in a Transboundary Context, 25 February 1991, ILM, vol. 30, 1991, 800 [hereinafter Espoo Convention]. The Convention entered into force on 10 September 1997. There is an increasing body of literature on transboundary EIA; see, e.g., the special issue on transboundary EIA, (2008) 26 *Impact Assessment And Project Appraisal* (IAPR); Bastmeijer Kees and Koivurova Timo (eds.), *Theory and Practise of Transboundary Environmental Impact Assessment* (2008); Neil Craik, *The International Law of Environmental Impact Assessment, Process, Substance and Integration* (2008); S. Marsden and T. Koivurova (eds.), *Transboundary Environmental Impact Assessment in the European Union: The Espoo Convention and its Kiev Protocol on Strategic Environmental Assessment* (2011). The Review of European Community and International Environmental Law (RECIEL) will publish soon its special issue marking the 20th anniversary of the Espoo Convention.

2 For an overview of the negotiations, see Robert Connelly, 'The UN Convention on EIA in a Transboundary Context: A Historical Perspective' (1999) 19 *Environmental Impact Assessment Review* 37.

three-year intervals: in 2001 in Sofia, Bulgaria; in 2004 in Cavtat, Croatia; in 2008 in Bucharest, Romania; and in Geneva, Switzerland in 2011.[3] At present, there are 45 parties to the Convention.[4] The Strategic Environmental Assessment (SEA) Protocol to the Convention was signed in 2003 as part of the Environment for Europe process and has been signed by 37 states as well as the EC.[5]

Following the 20th anniversary of the adoption of the Espoo Convention, it is appropriate to ponder the future directions of the Espoo regime ('regime' being the Convention, the Protocol, decisions by the MoP and the associated subsidiary body decisions[6]), especially in view of the fact that the Espoo parties have expressed their willingness to open the membership of the Convention to all the United Nations (UN) member states:

> Any other State, not referred to in paragraph 2 of this Article, that is a Member of the United Nations may accede to the Convention upon approval by the Meeting of the Parties. The Meeting of the Parties shall not consider or approve any request for accession by such a State until this paragraph has entered into force for all the States and organizations that were parties to the Convention on 27 February 2001.[7]

The SEA Protocol can already be joined by all UN member states.[8] Hence, the main question evaluated in this chapter is whether the Espoo regime could have global application and whether this would also be a desirable development from the viewpoint of environmental protection.

One important sub-set of this question is whether the Espoo regime could expand into a new realm of covering EIA and SEA in relation to impacts to the environment in areas beyond national jurisdiction (ABNJ).[9] The main focus of

3 See the Espoo Convention website, at http://live.unece.org/env/eia/mop.html.

4 See at http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-4&chapter=27&lang=en.

5 Available at http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-4-b&chapter=27&lang=en (1 June 2009). There are currently 23 parties. The Protocol entered into force on 11 July 2010.

6 Subsidiary bodies are organs created by the meeting of the parties to implement the regime in various ways. Examples include bodies tasked to review the compliance of the parties with their obligations.

7 Article 17(3) of the Convention includes here the first amendment to the Convention, adopted as Decision II/14, at http://live.unece.org/env/eia/about/amendment.html.

8 Article 23(3) reads: 'Any other State, not referred to in paragraph 2 above, that is a Member of the United Nations may accede to the Protocol upon approval by the Meeting of the Parties to the Convention serving as the Meeting of the Parties to the Protocol', at http://live.unece.org/env/eia/about/sea_text.html.

9 These are marine areas beyond national jurisdiction including the high seas beyond 200 nautical miles from the coastal states' territorial sea baselines and the deep seabed beyond national jurisdiction known as the Area.

this part of the chapter is to examine one possible legal approach to EIA/SEA over development activities possibly having an impact on the environment of the ABNJ, given that so far policy development has resulted in principally soft regulation. It is important to commence discussion on this, given that there is practically no scholarly research or policy proposals in relation to these questions.

Before moving to examining the main questions of this chapter, it is important to provide further explanation as to why the questions related to the expanding scope of membership of the Espoo regime should be addressed now. It is also useful to examine how the Espoo Convention is meant to function and how it in fact operates. This evaluation will be made partly on the basis of a recent study the author has conducted with Dr. Neil Craik and researcher Minna Torkkeli over how the Finnish EIA procedure has in practice been able to comply with the obligations of the Espoo Convention.[10] Moreover, one case study will be taken up – transboundary EIA (TEIA) over the Baltic Sea Gas Pipeline (BSGP). This case illustrates well how the Espoo Convention regime has become more ambitious in its approach to TEIA.

Distinguishing TEIA from Domestic EIA

EIA is a fairly simple regulatory tool and has spread throughout the globe. The first national EIA procedures appeared at the end of the 1960s and especially in the beginning of the 1970s, the most well known being the US National Environmental Policy Act (NEPA) of 1969.[11] In many cases the spread of national EIAs has been explained by other states borrowing the NEPA model but its expansion has not been that straightforward.[12] Many inter-governmental organizations – and later multinational development banks – have promoted EIA as a national policy tool from the mid 1970s onwards.[13]

10 Timo Koivurova, Neil Craik ja Minna Torkkeli, YVA-lain toimivuus valtioiden rajat ylittäviä ympäristövaikutuksia koskevien velvoitteiden näkökulmasta, 14.4.2011. Evaluation commissioned by the Finnish Ministry of the Environment. On file with the author.

11 National Environmental Policy Act, 42 USC §§ 4321–4370(f).

12 See, e.g., Tsaming Yang and Robert V. Percival, 'The Emergence of Global Environmental Law' (2009) 34 *Yale Journal of International Law* 615–664, at 627–630. They use the term 'legal transplantation' as 'deliberate copying and adaptation of significant portions of statutes or particular doctrines of law by one country from another' (p. 626).

13 Some of the relevant instruments can be found in Harald Hohmann (ed.), *Basic Documents of International Environmental Law, Vol. 1: The Important Declarations* (1992). The main international organizations in this field have been the United Nations General Assembly (UNGA), the United Nations Environment Programme (UNEP), the Organisation for Economic Co-operation and Development (OECD), the United Nations Economic Commission for Europe (UNECE) and the Council of Europe. See, e.g., the following UN instruments: United Nations General Assembly Resolution 2995 (XXVII), Co-operation Between States in the Field of the Environment; 1974 Charter of Economic

EIA can be defined as a governmentally controlled procedure by which scientific assessments are made – together with public participation – of the proposed activity the impacts of which may be harmful. Its goals include improving the quality of information to enable decision-makers to make better decisions from the viewpoint of the environment and to raise in general the level of public participation in environmental decision-making. It was the spread of national EIA procedures that made it possible to conclude legally relevant instruments and treaties on TEIA. Since TEIA functions to integrate foreign impacts and foreign actors into the operation of a domestic EIA procedure of the origin state in cases where transboundary impact is likely, this is best done by an international treaty, given that states' jurisdiction is confined mainly to their national territory.

Treaties or other instruments that try to organize a TEIA procedure must take into account the basic fact that states have differing domestic EIA procedures. From the viewpoint of the functioning of a TEIA procedure, the ideal situation would obviously be one in which all the contracting states had an identical EIA procedure, for the potentially affected state and its public would then know when and how to participate in the EIA procedure taking place in accordance with the EIA procedure of the origin state. Yet in many instances the domestic EIA procedure differs to quite some extent, making the organization of TEIA a complicated task.

TEIA is often perceived only as an extended EIA procedure between territorial states to include also transboundary impacts and foreign actors into the domestic EIA of the origin state in relation to the proposed projects, plans and programmes. Yet today the concept has enlarged in many ways. Questions have been raised as to whether countries are required to conduct EIA even if there are no transboundary impacts, in line with the goal of sustainable development.[14] Common concerns of humankind, chief among them climate change and biodiversity loss, are required by their respective treaties to be evaluated as part of a state's EIA procedure.[15] EIA procedures designed to evaluate the likely impacts of human activities on the environment in ABNJ are the most recent development in EIA/SEA since they are now being actively developed as one of the tools to tackle problems of biodiversity loss beyond national jurisdiction.[16]

Why This Question and Why Now?

Why should we ask whether the Espoo regime could become a global treaty regime for EIA/SEA? There are high normative expectations from the spread of EIA to various levels of governance. Currently, there are several processes trying to evaluate how EIA/SEA should be conducted to include common concerns of humankind, when proposed activities may impact the environment in ABNJ or how multilateral financial institutions and other lending institutions should perform EIA/SEA. There is moreover increased attention being given to whether the only developed international EIA/SEA regime, Espoo, could spread to become a global one and fulfil the normative expectations that there are for environmental assessment.

Why is this question topical now? In 2011, as noted, the Espoo Convention celebrated the 20th anniversary of its adoption. Even though the Convention did not enter into force until 1997, meetings of the signatories and pilot studies

---

Rights and Duties of States (Art. 3); 1987 UNEP Goals and Principles of Environmental Impact Assessment; Provisions for Co-operation Between States in Weather Modification. For the OECD, see, e.g., 1979 OECD Recommendation on the Assessment of Projects with Significant Impact on the Environment; 1974 OECD Recommendation on the Analysis of Environmental Consequences of Significant Projects; 1974 OECD Principles Concerning Transfrontier Pollution (paras. 6, 8); Equal Right of Access in Relation to Transfrontier Pollution in Relation to Implementation; Strengthening International Co-operation on Environmental Protection in Transfrontier Regions; Provision of Information to the Public and Public Participation in Decision-making Processes Related to the Prevention of, and Response to Accidents Involving Hazardous substances. See, e.g., the following UNECE instruments: Declaration of Policy on Prevention and Control of Water Pollution, Including Transboundary Pollution; Decision on International Co-operation on Shared Water Resources; Decision on Principles Regarding Co-operation in the Field of Transboundary Waters, 1987. A relevant instrument concluded by the Council of Europe is the Air Pollution in Frontier Areas. See also Chapter 8 of Agenda 21, especially Section 8 (5b).

14 The former vice-president of the International Court of Justice, Christopher Weeramantry, articulates this well – even if with fairly unique legal methodology – in his separate opinion to the case concerning the Gabcíkovo–Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997, at http://www.icj-cij.org/docket/files/92/7383.pdf.

15 Article 14(1) of the Convention on Biological Diversity expresses it in this way: 'Each Contracting Party, as far as possible and as appropriate, shall: (a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures; (b) Introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account; (c) Promote, on the basis of reciprocity, notification, exchange of information and consultation on activities under their jurisdiction or control which are likely to significantly affect adversely the biological diversity of other States or areas beyond the limits of national jurisdiction, by encouraging the conclusion of bilateral, regional or multilateral arrangements, as appropriate ...'. See at http://www.cbd.int/convention/articles/?a=cbd-14.

16 The most recent outcome of the United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction is the Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its twelfth meeting, at http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/431/39/PDF/N1143139.pdf?OpenElement. The recommendations of the fourth meeting of the UNGA BBNJ Working Group in 2011 at http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/397/64/PDF/N1139764.pdf?OpenElement and CBD COP 10 Decision X/29 paragraph 50http://www.cbd.int/cop10/doc/ are also relevant.

started almost immediately when the Convention was signed in 1991.[17] The 20th Anniversary of the Convention offers its parties an opportunity to look back and into the future, following the fifth MoP in June 2011 (together with the first MoP to the SEA Protocol).[18]

The Espoo regime continues to expand although a few states still need to ratify it for the 1st amendment to enter into force and open the Convention for all UN members (Iran has already expressed interest in becoming a party).[19] The SEA Protocol is already open to all UN members since it entered into force on 11 July 2010. Hence, when the Espoo Convention's 1st amendment enters into force, the Espoo regime seems likely to expand further. Moreover, international courts have given very recent normative signals that TEIA is binding on all states under general international law, making it very timely to ask how to operationalize TEIA. In the 2010 decided *Pulp Mills* case between Uruguay and Argentina the International Court of Justice (ICJ) unequivocally stated the following:

> In this sense, the obligation to protect and preserve, under Article 41 (a) of the Statute, has to be interpreted in accordance with 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 an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource. Moreover, due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works liable to affect the régime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works.[20]

The ICJ thus made clear that TEIA is both an independent normative principle of general international law as well as part of the no-harm principle. Consequently, all states are expected to perform TEIA as an international legal obligation. Yet, the Court also said that the scope and content of TEIA remain under the discretion of states although it argued that it needs to be conducted diligently. This likely means that the discretion of states on how to regulate and apply TEIA is fairly broad, even if constrained by the requirement of due diligence.[21] Argentina invoked the Espoo Convention to support its legal argument, but the ICJ could not apply the Convention as neither of the disputants were parties to it.[22]

In a similar vein, the recent advisory opinion of the International Tribunal for the Law of the Sea (ITLOS) Sea-Bed Disputes Chamber first relied on the above-quoted paragraph from the *Pulp Mills* case and then continued that:

> Although aimed at the specific situation under discussion by the Court, the language used seems broad enough to cover activities in the Area even beyond the scope of the Regulations. The Court's reasoning in a transboundary context may also apply to activities with an impact on the environment in an area beyond the limits of national jurisdiction; and the Court's references to 'shared resources' may also apply to resources that are the common heritage of mankind. Thus, in light of the customary rule mentioned by the ICJ, it may be considered that environmental impact assessments should be included in the system of consultations and prior notifications set out in article 142 of the Convention with respect to 'resource deposits in the Area which lie across limits of national jurisdiction'.[23]

Even if the Sea-Bed Disputes Chamber did not provide a clear-cut answer as to whether EIA/SEA needs to be conducted prior to authorization of an activity likely to have adverse impacts to the environment in ABNJ, it does contemplate that possibility in a serious manner. The duty to evaluate impacts to the environment of ABNJ seems already included in the no-harm principle as articulated in the Stockholm and Rio Declarations[24] and in numerous international treaties and other instruments; it is also affirmed to be part of the corpus of international law relating to the environment by the ICJ.[25] The principle, as articulated in Rio Declaration's principle 2 stipulates that:

---

17 These meetings of the signatories are studied in T. Koivurova, *Environmental Impact Assessment in the Arctic: A Study of International Legal Norms* (2002) 298–300.

18 See at http://live.unece.org/env/eia/meetings/mop_5.html.

19 See at http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-4-a&chapter=27&lang=en.

20 Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay) (20 April 2010, Judgment), para. 204, at http://www.icj-cij.org/docket/files/135/15877.pdf.

21 Ibid., para. 205 provides: '... it is the view of the Court that it is for each State to determine in its domestic legislation or in the authorization process for the project, the specific content of the environmental impact assessment required in each case, having regard to the nature and magnitude of the proposed development and its likely adverse impact on the environment as well as to the need to exercise due diligence in conducting such an assessment. The Court also considers that an environmental impact assessment must be conducted prior to the implementation of a project. Moreover, once operations have started and, where necessary, throughout the life of the project, continuous monitoring of its effects on the environment shall be undertaken.'

22 Ibid., para. 205.

23 Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area (Request for Advisory Opinion submitted to the Seabed Disputes Chamber), Case No. 17, para. 148, at http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf.

24 Article 21 of the Stockholm Declaration and Article 2 of the Rio Declaration of 1992. The Stockholm Declaration can be found from 11 I.L.M. 1416 (1972) and the Rio Declaration from 31 I.L.M. 874 (1992).

25 The ICJ first stated this view in its Advisory Opinion in the *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I.C.J. Reports 1996, p. 226, para. 29. The

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and *the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment* of other States or *of areas beyond the limits of national jurisdiction.* (author's emphasis)

The Espoo Convention – How is it Supposed to Function?

The Espoo Convention differs from domestic approaches to TEIA and also inter-state procedures. By 'domestic approaches' is meant domestic EIA and permitting procedures that are formally open for foreign impacts and foreign actors. With this approach, it is however practically impossible to include transboundary impacts and actors in any meaningful way, given that the mere opening of domestic procedures to foreign impacts and actors does not guarantee that these can be effectively included in the operation of domestic EIA and authorization procedures; international treaties are needed to ensure that domestic procedures can be extended to the territory of other states. By 'inter-state procedures' is meant nation-states preventing or at least minimizing transboundary pollution and using TEIA only as a trigger. In the UN International Law Commission's Preventive Draft Articles[26] the focus is on nation-states negotiating how to prevent and minimize transboundary pollution on the basis of TEIA results. The practical problem faced by this approach is that it is very difficult to operationalize rules that expect states to shoulder each and every transboundary case anew.[27] The Espoo Convention builds on the regular functioning of domestic EIA and domestic authorization procedures to which foreign impacts and foreign actors can then be integrated via an international treaty. This type of approach can be called a 'transnational EIA procedure'[28] in the sense that it avoids as much as possible interference by the nation-states and rather builds on the regular functioning of domestic legal and administrative systems, into which foreign impacts and foreign actors can be integrated.

Court also repeated this passage in the case concerning the *Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, I.C.J. Reports 1997, p. 7, para. 53.

26 Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, 2001, at http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_7_2001.pdf.

27 See John Knox, 'Assessing the Candidates for a Global Treaty on Transboundary Environmental Impact Assessment' (2003–2005) Vol. XII *New York University Environmental Law Journal* 153–168, at 159–161.

28 See T. Koivurova, 'The Transnational EIA procedure of the Espoo Convention' (1997) Vol. VIII *Finnish Yearbook of International Law* 161–199.

The Espoo Convention expects the States Parties to establish national EIA and authorization procedures for Appendix 1 activities ('screening').[29] It also lays down minimum requirements for the Environmental Impact Statement (EIS)[30] and expects EIA to include public participation. The Convention's system is very much built on the functioning of domestic EIA and permitting procedures, since it is to these procedures that the foreign impacts and foreign actors are integrated. Consequently, the way each TEIA is conducted depends on what kind of domestic EIA and authorization procedure exists in a given state. Here, the Finnish national EIA procedure will be used to illustrate how TEIA is organized when a national system (that of Finland's) acts as the framework for Espoo TEIA.

Under Article 3 the Espoo Convention obliges the origin state to initiate the TEIA procedure as early as possible but no later than when it informs its own public of a proposed development activity.[31] Different states will thus commence the TEIA procedure when their national systems require the authorities to inform the public. Finland's domestic EIA procedure contains a 'scoping' stage, in which the proponent (who submits the first draft of the scoping document and is responsible for making the impact assessments), together with the public and expert authorities, discuss what should be studied in the actual impact assessment stage. Since the public is notified in the scoping phase, Finland is obligated by the Espoo Convention to commence the TEIA very early on with the affected state and its public. During the scoping stage, the affected state and its public must be informed and given an opportunity to comment on the scoping document. This is of importance from the viewpoint of studying the transboundary impacts, given that it is the affected state and its public that will likely place most emphasis on how transboundary impacts are studied. The emphasis on studying transboundary impacts carefully is further reinforced by Article 3(6), which requires the affected state to deliver information on the environmental conditions on its side of the border to the origin state, if the latter so requests.

When the final EIS has been completed by the proponent, the responsible authorities organize consultation of the public on both sides of the border: the affected state's public has equal rights to be informed and to comment on the proposed activity as the origin state's public.[32] The Convention requires the origin

29 Article 2 (2 and 3) of the Convention reads: 'Each Party shall take the necessary legal, administrative or other measures to implement the provisions of this Convention, including, with respect to proposed activities listed in Appendix I that are likely to cause significant adverse transboundary impact, the establishment of an environmental impact assessment procedure that permits public participation and preparation of the environmental impact assessment documentation described in Appendix II … The Party of origin shall ensure that in accordance with the provisions of this Convention an environmental impact assessment is undertaken prior to a decision to authorize or undertake a proposed activity listed in Appendix I that is likely to cause a significant adverse transboundary impact'.

30 See Appendix II of the Convention.

31 Article 3(1) of the Convention.

32 Article 2(6) of the Convention.

state to immediately commence consultations with the potentially affected state in order to discuss possible mitigation measures etc.[33] The final EIS is thus commented on differently by the affected state and its public: the former will discuss the proposed activity via inter-state consultations with the origin state whereas the members of the public of the affected state channel their comments directly to the domestic EIA authorities of the origin state under the same conditions as the origin state's public. The Convention expects the origin state's permit authority to take due account of the comments made by the affected state and its public, which are of crucial importance in deciding how the proposed activity's transboundary impacts will be mitigated.[34] The final decision must be delivered to the affected state and its public. Post-project analysis – a phase where the concerned states would monitor what impacts will result from the activity – will be undertaken if concerned states agree on its necessity.

The Espoo Regime – How it Functions in Practice?

Recently, the present author conducted an evaluation of the Finnish TEIA capacity together with Dr. Neil Craik from Canada and researcher Minna Torkkeli.[35] Overall it was found that the Finnish TEIA system had performed effectively. There had been quite a number of TEIA's where Finland had been an origin state (21 cases) and an affected state (17). In comparison with other Member States of the European Union (EU), Finland was a little over the average in terms of how many TEIAs had been completed.[36]

One of the surprises found in the study was the way Finland had interpreted Article 5 of the Espoo Convention. Article 5 reads as follows:

> The Party of origin shall, after completion of the environmental impact assessment documentation, without undue delay enter into consultations with the affected Party concerning, inter alia, the potential transboundary impact of the proposed activity and measures to reduce or eliminate its impact. Consultations may relate to:
>
> (a) Possible alternatives to the proposed activity, including the no-action alternative and possible measures to mitigate significant adverse transboundary impact and to monitor the effects of such measures at the expense of the Party of origin;
>
> (b) Other forms of possible mutual assistance in reducing any significant adverse transboundary impact of the proposed activity; and
>
> (c) Any other appropriate matters relating to the proposed activity.
>
> The Parties shall agree, at the commencement of such consultations, on a reasonable time-frame for the duration of the consultation period. Any such consultations may be conducted through an appropriate joint body, where one exists.

Article 5 accords the affected state a right to convey its views directly to the origin state, and enables it to raise possible mitigation measures to be taken to reduce transboundary harm on the basis of the EIS. As mentioned above, the public of the affected state has a right to comment on the impacts of the proposed activity on an equal footing with the public of the origin state. Yet when Finland is an origin state, the standard procedure (with a couple of exceptions) is to not commence inter-state consultations but to merge the affected state's comments as part of all the comments from the affected state into Finland's domestic EIA. Another surprise was that this was fairly common practice amongst the Espoo parties. This was found from the cases where Finland had been an affected state. Of all the cases where Finland had been an affected state (with the exception of the BSGP), none of the origin states had felt it necessary to organize inter-state consultations with Finland.[37]

This misinterpretation of Article 5 begs the question: what procedures does the Convention have in place for non-compliance? Such matters fall to the Implementation Committee, which is now also in charge of scrutinizing the state reports, and which has collated and published its previous opinions on matters related to the Convention.[38] This is a document consisting of the major findings of the Implementation Committee between the years 2001–2010, enabling the committee to signal how the Convention should be interpreted by the states parties in the future. In this document, the Implementation Committee urges the parties to separate inter-state consultations under Article 5 from the way the public of the affected state is entitled to participate under Article 4.2:

> The Committee reminded Parties that consultations under article 5 were bilateral or multilateral discussions between authorities that had been authorized by the concerned Parties, and should not be confused with public participation under

33 See Article 5 of the Convention.
34 Article 6 of the Convention.
35 See above, note 101.
36 2009 European Commission, DG ENV Study concerning the report on the application and effectiveness of the EIA Directive Final report, June 2009, table 6.8.

37 Above, note 10.
38 Opinions of the Implementation Committee, 2001–2010, note by the Implementation Committee, ECE/MP.EIA/IC/2011/INF.1. There is an interesting parallel here to the way the human rights treaty monitoring mechanisms issue General Comments.

article 3, paragraph 8, and article 4, paragraph 2, or with consultation of the authorities under article 4, paragraph 2, in the areas likely to be affected.[39]

Case-Study: Baltic Sea Gas Pipeline

The Espoo regime has also had to confront ever more challenging projects, of which the most difficult has been the BSGP, that is, TEIA over two gas pipelines from Russia to Germany to be laid in the seabed of the Baltic Sea, traversing the EEZs and territorial seas of five states (the Russian Federation, Finland, Sweden, Denmark and Germany). Here it is useful to only highlight some aspects of the case that relate to the marine environment and emphasize how quickly the Espoo regime is becoming more ambitious and collective in its approach.[40]

A pipeline traversing the EEZs and territorial seas of five states does not fit easily within the system of the Espoo Convention. The Convention requires each and every state to determine for itself whether there are likely significant adverse transboundary impacts from the proposed projects within its jurisdiction to other states' environments. During the initial stages of the BSGP project, some states were of the view that there would be no significant adverse transboundary impacts from the BSGP, hence no need to apply the Espoo Convention to the pipeline project. This would have meant that the company developing the project, Nord Stream, would have undergone EIA and permitting procedures in regard to each portion of the pipeline in each of the five origin states. This is known as 'salami slicing', a practice which has been condemned by the European Court of Justice (ECJ)[41] in relation to the EIA Directive.[42]

Yet, as a sign of how far the Espoo regime has evolved based on experience in the EU, the Espoo contact points got together in 2006 and required the company to perform an EIA over the entire gas pipeline(s), not only the individual portions of it. They also decided that each of the Baltic Sea littoral states can and must be seen as affected states of the BSGP, meaning that nine states and their publics could participate in any of the five national EIA systems as well as comment on the EIA done by the company over the entire pipeline(s). This type of community approach illustrates well the changes in the way the Espoo Convention can handle very complex and challenging projects; the BSGP case involved all nine Baltic Sea littoral states and their publics even though there was no clear evidence at the beginning that significant adverse transboundary impact would ensue. Similar types of development have recently commenced with nuclear energy-related projects, some states notifying each and every party to the Espoo Convention, just to make sure that all states that want to participate in the TEIA have the opportunity to do so. For this reason, the Secretariat prepared a background note to the fifth meeting of the parties as to how to apply the Convention to nuclear energy-related activities.[43]

Could the Espoo Convention Become a Global Treaty on TEIA?

Since the Espoo parties have signalled their willingness to open the Espoo regime to all the UN member states, it is pertinent to ask whether: (a) this is the best way to move forward and (b) it is politically viable. We may ponder whether the requirements the Convention sets out for domestic EIA, studied above, are too ambitious for e.g. many developing nations. On the other hand, the Convention only expects a minimum standard for domestic EIAs: that they are established for appendix I activities, with no ambition to harmonize the national EIAs to any great measure.

It might also be questioned whether there is enough emphasis in the Espoo Convention on preventing or at least minimizing transboundary pollution along the lines of the UN International Law Commission produced Preventive Draft Articles – articles that have already been cited by judicial bodies.[44] These Draft Articles expect states to be key actors in preventing and mitigating transboundary pollution, which in itself, as pointed out above, can be seen as a problem. It is very difficult to foresee that the ILC's Preventive Draft Articles could serve as a basis for a regime that functions on a day-to-day basis, given that the Articles expect central governments to act on TEIA; they are too large actors for such procedures. The Espoo Convention does not contain strong substantive guidance: Article 2(1) expresses more of a goal than a substantive standard.[45] The Convention relies intensely on scientific information influencing decision-making, which in many cases seems to have at the very least the possibility to modify project planning.

We might also ask whether it makes sense at all to have global MoPs to scrutinize situations of transboundary pollution that take place largely between immediate neighbours only. This question is usefully answered by pointing to increasing sub-regionalization of the Espoo regime. The Espoo parties now work with their neighbours via different sub-regions, which are created and sustained

39 Ibid, para. 69.

40 For a more extensive treatment, see T. Koivurova and I. Pölönen, 'Transboundary Environmental Impact Assessment in the Case of the Baltic Sea Gas Pipeline'(2010) 25 *International Journal of Marine and Coastal Law* 151–181.

41 After the Treaty of Lisbon entered into force in December 2009, it is now named 'Court of Justice of the European Union'.

42 See Case C 205/08.

43 Background note on the application of the Convention to nuclear energy-related activities, at http://live.unece.org/fileadmin/DAM/env/documents/2011/eia/ece.mp.eia.2011.5.e.pdf.

44 See e.g. para. 116 of the Seabed Disputes Chamber's advisory opinion, above note 23.

45 It reads: 'The Parties shall, either individually or jointly, take all appropriate and effective measures to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities.'

either via legally binding agreements or just by regular meetings.[46] Hence, sub-regionalization of the Espoo regime makes possible both taking into account of (a) regional realities and, importantly, (b) assistance from the community of states. Many developing nations do need financial support and capacity building in order to organize as complex a procedure as TEIA.[47]

Moreover, since the Espoo regime is the only really functioning multilateral TEIA regime (with 20 years of experience), it is evident that the experience garnered throughout its life-cycle is of extreme importance to be disseminated to other regions and countries. And its parties are not only EU states. In fact, the Espoo Convention's 45 parties range from Canada and Western European states to Eastern Europe and Caucasus and even to Central Asia. The regime thus already possesses a wide diversity of developing and developed states as parties. Very recently, Russian President Dimitri Medvedev announced Russia's intention to ratify both the Espoo and the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters[48] (Aarhus Convention).[49] Russia is a Central and East Asian state as well as a European one. Furthermore, the last meeting of the parties adopted a decision to accelerate the globalization of the Espoo regime:

> 1. Request any State that wishes to accede to the Convention or to the Protocol, and that is a Member of the United Nations but that is not a member of UNECE, to address a letter to the Executive Secretary of UNECE from its Minister of Foreign Affairs expressing the State's desire to accede to the Convention or to the Protocol;
>
> 2. Also request a State referred to in paragraph 1, which wishes to accede to the Convention, to provide a copy of its legislation in one of the official languages of the United Nations, establishing clear, transparent and effective procedures for environmental impact assessment in a transboundary context in accordance with the provisions of the Convention;
>
> 3. Further request a State referred to in paragraph 1, which wishes to accede to the Protocol, to provide a copy of its legislation in one of the official languages of the United Nations, establishing clear, transparent and effective procedures for strategic environmental assessment in accordance with the objective and provisions of the Protocol;
>
> 4. Expect to consider the information referred to in paragraphs 1, 2 and 3, when deciding whether to approve the accession of a State that is a Member of the United Nations but that is not a member of UNECE;[50]

46 See the sub-regions website at http://live.unece.org/env/eia/subregions.html.
47 See Simon Marsden's chapter 6 in this volume.
48 The text is reproduced in 38 I.L.M. 517 (1999).
49 See at UNECE website at http://www.unece.org/press/pr2011/11env_p26e.html. This is in line with another recent development, namely that Russia's nuclear power company agrees to consult with neighbours on environmental impacts within the framework of UNECE's Espoo Convention, see at http://www.unece.org/press/pr2011/11env_p21e.htm.

Is the Espoo Regime's Globalization Politically Viable?

The only significant problem standing in the way of the Espoo Convention becoming a globally applicable TEIA regime is that it was commenced as a regional regime, with core countries being Member States of the EU. There are very few treaties that have become global treaty regimes if they have started as regional ones. Yet, in the case of the Espoo regime, there are good prospects for globalizing a regionally initiated regime. First of all, the Espoo regime is functioning under the auspices of the universal UN system, in one of its Economic Commissions (UNECE). Another reason for possible globalization of the Espoo Convention was taken up by John Knox in an article where he discussed which of the two possible global TEIA regimes have better chances of realization, ending up favouring the Espoo Convention rather than the ILC Preventive Draft Articles. As pointed out by Knox, the Espoo regime can very well induce a type of ripple effect:

> Espoo originally addressed the third obstacle – countries' preference for agreements on transboundary harm that include their neighbors – simply by limiting its scope to European and North American countries. Now that most of those countries have joined, they might create a kind of snowball effect, in which the membership of Espoo naturally expands as countries along the borders of the existing parties decide that it is in their interest to join an agreement that includes their neighbors. In addition, existing parties have an incentive to convince their neighbors to join. For example, Russia is not yet a party to Espoo, but several of its neighbors are, including Finland, Kazakhstan, and Ukraine. Those countries have presumably already done much of the work necessary to bring themselves into compliance with Espoo's obligations. They now have an incentive to convince Russia to join so that they have the benefits of receiving transboundary EIA of projects in Russia. If Russia joined, it would then have a similar incentive to bring in non-UNECE countries that neighbor it, such as China and Japan. In this way, Espoo could gradually ripple across the globe.[51]

Even if the Convention is not yet opened for parties outside of the UNECE, it already involves non-parties in its practical work, especially in sub-regions, which

50 See MoP decisions V/8 and I/8, at http://live.unece.org/fileadmin/DAM/env/documents/2011/eia/ece.mp.eia.2011.L.2_ece.mp.eia.sea.2011.L.2.e.pdf.
51 See Knox, above note 27, 165–166.

likely paves the way for a speedier ripple effect when the Convention opens up for all UN members. Already now there are signs that states are perceiving TEIA as a global institution. In December 2009, the Federated States of Micronesia requested initiation of a TEIA to examine the expansion and life-extension of the Prunéřov II coal-fired power plant in the Czech Republic. Micronesia – a state that is particularly vulnerable to impacts of rising sea levels – was concerned about the climate change impacts of this expansion and hence requested TEIA from the Czech Ministry of the Environment.[52]

On balance, there do seem to be good prospects for the Espoo Convention to spread as obstacles are lifted by the States Parties when the 1st amendment enters into force. This is very much related to the design of the Espoo regime, which builds both on sub-regional bottom-up practical co-operation but also on the treaty community being able to address issues related to capacity building and financial support, which are of vast importance for the developing world. And it does seem desirable that this will take place. The Espoo Convention has 20 years' experience of how to conduct TEIAs, which certainly should find its way to the practice of states throughout the globe, especially now that the ICJ has also affirmed that all states are required to carry out TEIA.

Projects and Strategies Likely to Have an Impact on the Environment of ABNJ – Any Role for the Espoo Regime?

A much more challenging question for the Espoo regime is whether it could cover EIA/SEA over impacts to ABNJ. This is a reasonable question for the Espoo parties, given that they have intentionally opened the regime for the global community of states. It is also an important question to resolve for at least some of the concerns related to ABNJ management. The Espoo regime is already the main EIA/SEA international regime, and if its membership extends further, it is only natural to ask whether the Espoo regime would cover, as perhaps the primary example of an ABNJ, those parts of high seas governance that relate to EIA/SEA.

Even if EIA/SEA over proposed activities likely to have an impact on high seas biodiversity is one of the cutting-edge issues – being discussed both in the UN[53] and under the Convention on Biological Diversity regime[54] – it is puzzling why there have been no scholarly proposals as to how legal EIA/SEA for activities likely to have an adverse impact on the environment of the ABNJ could be created. There is one research article, published in 2004, contemplating the possibility of negotiating an implementing agreement to the United Nations Convention on the Law of the Sea (UNCLOS) on EIA, but not even this article looks into the impacts on ABNJ.[55]

One reason for this scholarly inattention is likely the ongoing processes to produce rules – or even an implementing agreement – for activities that have an adverse impact on high seas biodiversity. The UN informal working group has convened four times since 2006 to study the issue, and has confronted significant problems, in particular the one relating to the legal status of marine genetic resources in ABNJ. Developing states argue that such resources should be part of the common heritage of mankind and thus fall under the mandate of the International Sea-Bed Authority; developed states have opposed this approach and pointed to the clear provisions in UNCLOS,[56] which includes only non-living resources of the Area under the common heritage of mankind, resulting in marine living resources including marine genetic resources being part of the open access high seas regime. Aside from these difficult political controversies, there is a lot of consensus on certain aspects governing the biodiversity issues related to ABNJ, in particular the use of EIA/SEA. The CBD Expert Workshop on Scientific and Technical Elements of CBD Voluntary Biodiversity Inclusive EIA Guidelines for Marine Areas beyond National Jurisdiction held in Manila in November 2009 developed some guidance on EIA/SEA over activities that may impact ABNJ biodiversity, which will likely be adopted as soft-law guidelines at some point in time.[57] Yet it seems obvious that soft-law guidance is not enough, especially in an area where compliance is very difficult to monitor.[58]

It remains to be seen what comes out of these ABNJ biodiversity processes as the issues are difficult, and concern the mandates of many state and non-state institutions.[59] Hence, one possibility might be to 'isolate' EIA/SEA from the

52 Two documents stating what has taken place so far (received from Sini Harkki, on file with the author).

53 This is done in the United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, at http://www.un.org/Depts/los/biodiversityworkinggroup/marine_biodiversity.htm.

54 See, e.g., Report of the Expert Workshop on Scientific and Technical Aspects Relevant to Environmental Impact Assessment in Marine Areas beyond National Jurisdiction, UNEP/CBD/SBSTTA/14/INF/5, 8 March 2010.

55 M. Tanaka, 'Lessons from the Protracted MOX Plant Dispute: A Proposed Protocol on Marine Environmental Impact Assessment to the United Nations Convention on the Law of the Sea' (2004) 25 *Michigan Journal of Environmental Law* 337. There is a forthcoming article in the *International Journal of Marine and Coastal Law* (2012) 27(2), in which Alex Oude Elferink and Petra Drankier will look into these issues.

56 The 1982 United Nations Convention on the Law of the Sea (the 1982 LOSC). The text is reproduced in 21 I.L.M. 1261 (1982).

57 See the interesting 2009 expert meeting report, at http://www.cbd.int/doc/meetings/mar/eweiama-01/official/eweiama-01-02-en.pdf. This guidance is being incorporated in Draft CBD Guidelines on Biodiversity Inclusive EIA/SEA for Marine and Coastal Areas which are likely to be considered by the 11th meeting of the Conference of the Parties (COP 11) of the CBD in 2012.

58 See Robin Warner's chapter 12 in this volume.

59 For a comprehensive overview, see R. Warner, *Protecting the Oceans beyond National Jurisdiction: Strengthening the International Law Framework* (2009), in particular

overall agenda for biodiversity protection and use in ABNJ, given that such a broad and ambitious regulatory agenda is not easily solved. Yet there is a lot of consensus on the need for developing EIA/SEA frameworks for ABNJ,[60] which might present an opportunity for the Espoo regime to provide hard-law guidance.

Projects and Strategies Likely to Have an Impact on the Environment of ABNJ – Possible Problems for the Role of the Espoo Regime?

The Espoo regime is not a natural 'nesting' place for EIA/SEA rules for activities having a likely impact on the environment in ABNJ. Since UNCLOS regulates in its Articles 204–206 EIA for all activities having an impact on the marine environment, it would be this convention where such an EIA/SEA implementing agreement would most naturally be located. Yet the current processes envisage measures geared towards regulating, in ambitious and overarching manner, protection and use of biodiversity in ABNJ; the EU has already made a proposal to move forward with an implementing agreement to realize this, and the UN process is moving in this direction.[61] One component of such an implementing agreement could be EIA/SEA. Yet, as there currently are only few positive signals that such an implementing agreement would receive political support, it is important to study possible hard-law alternatives, such as the Espoo regime taking over the EIA/SEA component.

It has to be noted that the Espoo regime has not much expertise and experience in the maritime domain. The Convention and the Protocol cover only land-based (some offshore) stationary activities. They do not cover vessel source pollution or fisheries activities, which are of course the root cause of many problems for the biodiversity and the environment of the marine areas in ABNJ. On the other hand, it is important to note that that the Espoo parties have already shown the ambition to develop the regime to new regulatory fields, as exemplified by the adoption of the SEA Protocol, which focused on harmonizing SEA procedures (only one provision on transboundary SEA) rather than regulating what the Convention does, namely transboundary pollution. Hence, we know that the Espoo parties are ready to extend the regime to new horizons if regulatory need can be shown to exist. It is also useful to note that there is an increasing experience in the Espoo regime over performing collective EIAs protecting the rights of the whole treaty community, for instance in nuclear energy-related activities.

A Second Protocol to the Espoo Convention?

It is possible to envisage a process whereby globalizing the Espoo regime triggers negotiations for a second Protocol to the Convention aimed at preventing and minimizing impacts to the environment in ABNJ (possibly also including specified forms of vessel source pollution to the marine environment in general). It would be important to base the second Protocol on the already existing customary international law principle of no-harm, which explicitly requires states to prevent harm to the environment in ABNJ from the activities under their jurisdiction and control, in particular activities of their flag vessels.

A possible sketchy model for EIA/SEA in ABNJ should build on the strengths of the Espoo regime. Only activities, plans and programmes of the origin state would need to be evaluated by it, if they were likely to have a significant adverse impact on the environment of ABNJ. If such impacts were likely, the origin state would be under an obligation to notify all states parties to the second protocol and other interested parties other than nation-states, including international and regional organizations such as the International Sea-Bed Authority, regional fisheries management organizations and some regional seas organizations. It might be asked how third states can be excluded from such notification, given that they also have rights and interests in protecting the ABNJ environment.[62] Yet this can also serve as an incentive for third states (and possibly some inter-governmental institutions) to become parties to the second protocol since second protocol parties could respond that they are only trying to create a procedure whereby the no-harm principle is really put into practice in a legally effective manner. They could make an argument that if the third states and other institutions are serious in applying the no-harm principle in practice and thus protecting the environment of the ABNJ, they should become parties to the second protocol. This type of collective notification procedure is already increasingly taking place

pp. 207–235.

60 See Robin Warner's chapter 12 in this volume.

61 Recommendations of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction and Co-Chairs' summary of discussions took this up after its most recent meeting from 31 May to 3 June 2011. They provide the following: '… recommends that: (a) A process be initiated, by the General Assembly, with a view to ensuring that the legal framework for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction effectively addresses those issues by identifying gaps and ways forward, including through the implementation of existing instruments and the possible development of a multilateral agreement under the United Nations Convention on the Law of the Sea; (b) This process would address the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, in particular, together and as a whole, marine genetic resources, including questions on the sharing of benefits, measures such as area-based management tools, including marine protected areas, and environmental impact assessments, capacity-building and the transfer of marine technology; (c) This process would take place: (i) in the existing Working Group; and (ii) in the format of intersessional workshops aimed at improving understanding of the issues and clarifying key questions as an input to the work of the Working Group …'. See at http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/397/64/PDF/N1139764.pdf?OpenElement.

62 It has to be admitted, however, that if third states would e.g. invoke their UNCLOS or general international law guaranteed rights, it would be difficult for the origin state to reject notifying them.

in the Espoo Convention as regards the nuclear energy-related projects and has manifested itself at least to some extent in the BSGP case.[63]

As in the Espoo regime in general, TEIA is operationalized via the functioning of the domestic EIA system and this type of approach would also be suitable in terms of evaluating impacts to the environment of ABNJ. When the origin state had completed the assessment of impacts to the environment of ABNJ, it would need to notify all those states that have informed the origin state that they wanted to participate in the domestic EIA/SEA and their publics. All these affected states and their civil societies would have a right to comment on the results of the assessments by sending these to the domestic EIA authorities. Thereafter, all this information would be delivered, as is standard practice in the Espoo regime, to the permitting authority, which would be obliged to take due account of the information from the affected states and their publics.[64] Moreover, the permitting authority would be obligated to send the final decision to the authorities of all the affected states, which in turn would need to deliver it to their own publics.

Conclusion: Is an Espoo Regime the Solution?

There seems to be no clear-cut reason why the Espoo regime could not become the global regime on EIA/SEA. The Espoo parties have intentionally opened the regime for all UN members, it contains the best standards in this field of international relations and is the only regime that has experience and continues to learn how to better conduct EIA/SEA in an international context. If a second protocol on impacts to the environment on ABNJ were negotiated, this would likely place further incentives on states to join the globalizing Espoo regime, given that this protocol would deal with impacts to the global commons – a development that should be of interest to the whole international community. Even if the Espoo regime has not garnered experiences in evaluating impacts of vessel source pollution, this is no obstacle for adopting the kind of second protocol considered above, even if one has to admit that this latter development is less likely than global spread of the Espoo Convention in terms of TEIA/SEA between states.

Yet as also pointed out in this chapter, it may also happen that the Espoo regime will not spread throughout the world and remains (only) an important regional regime on EIA/SEA. It is very difficult to predict the way states and other actors will come to perceive the best and most viable solution for EIA/SEA in an international context. If they choose the Espoo regime, one single regime would be in charge of evaluating the likely significant environmental impacts from activities, plans and programmes to various components of the environment. From the perspective of environmental protection, this option would certainly have its benefits.

63 See above, section entitled 'Case-Study: Baltic Sea Gas Pipeline'.
64 Article 6 of the Convention.

Bibliography

Abdulrazzak, Dalal and Stephen Trombulak, 'Classifying Levels of Protection in Marine Protected Areas' (2011) 36 *Marine Policy* 576

Adedayo Ayoade, Morakinyo, *Disused Offshore Installations and Pipelines: Towards Sustainable Decommissioning* (Kluwer Law International, 2002)

Agardi, Tundi, Giuseppe Notarbartolo di Sciara and Patrick Christie, 'Mind the Gap: Addressing the Shortcomings of Marine Protected Areas through Large Scale Marine Spatial Planning' (2011) 36 *Marine Policy* 226

Alexander, Lisa, 'Stakeholder Participation in New Governance: Lessons from Chicago's Public Housing Reform Experiment' (2009) 16 *Georgetown Journal on Poverty Law and Policy* 117

Allchin, R and J Davidson, *Whitsundays Case Study Background Report, Changing Currents in Marine Biodiversity Governance and Management: Responding to Climate Change* (School of Geography and Environmental Studies, University of Tasmania, 2012)

ARC Centre of Excellence, Coral Reef Studies, 'What is the Coral Triangle Initiative?' http://www.coralcoe.org.au/events/ctiworkshop/ctiinfo.html

Arctic Environment Protection Strategy, *Guidelines for Environmental Impact Assessment in the Arctic*, 1997, http://ceq.hss.doe.gov/nepa/eiaguide.pdf

Ashe, John and Simon Marsden, 'SEA in Australia' in Barry Sadler et al, (eds), *Strategic Environmental Assessment Handbook* (Earthscan, 2011) 26

Asian Development Bank, *Safeguard Policy Statement* (Asian Development Bank, 2009)

Australian Fisheries Management Authority, *Heard Island and McDonald Islands Fishery Management Plan* (Australian Fisheries Management Authority, 2002)

Axelrod, Robert, *The Evolution of Cooperation* (Basic Books, 1984)

Badenoch, Nathan, *Transboundary Environmental Governance – Principles and Practice in Mainland Southeast Asia* (World Resources Institute, 2002)

Baker, Susan and Katarina Eckerberg (eds), *In Pursuit of Sustainable Development: New Governance Practices at the Sub-national Level in Europe* (Routledge, 2008)

Bala, G et al, 'Impact of Geoengineering Schemes on the Global Hydrological Cycle' (June 3 2008) 105 *PNAS* 7664

Barrett, Scott, 'The Incredible Economics of Geo-engineering' (2008) 39 *Environ. Resource Econ.* 45

Bastmeijer, Kees and Timo Koivurova (eds), *Theory and Practice of Transboundary Environmental Impact Assessment* (Martinus Nijhoff, 2008)

Bastmeijer, Kees and Ricardo Roura, 'Environmental Impact Assessment in Antarctica' in Kees Bastmeijer and Timo Koivurova (eds), *Theory and Practice*