

Benefits and costs of transboundary EIA

Applying the UNECE Convention on Environmental Impact Assessment in a Transboundary Context

This paper outlines the benefits, and costs, of environmental impact assessment (EIA) in a transboundary context. There are substantial benefits of EIA, including transboundary EIA, though these are generally difficult to express in monetary terms. The costs of transboundary EIA can be estimated and are generally very low as a proportion of total project cost.

What is transboundary EIA?

Environmental damage can often be anticipated. For instance, it is possible to assess the impact that a project will have on the environment when it is still at the design stage. However, environmental threats do not respect national borders so, for a project that might have adverse environmental impact across borders, the impact assessment may be incomplete if other countries are not consulted.

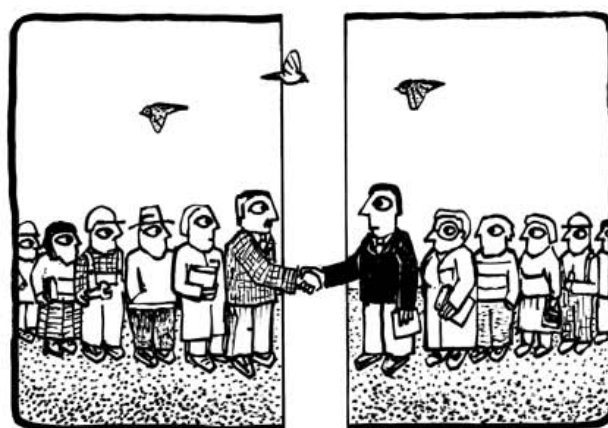
Environmental impact assessment (EIA) is an important tool for an integrated approach to the protection of the environment, as it requires a comprehensive assessment of the environmental impacts of an activity.

EIA has been included in the national legislation of a large number of countries and there is much experience with its implementation. EIA is applied at the project level to:

- ★ identify and assess the likely environmental impacts of the project
- ★ report on those impacts and on measures to be taken to prevent, reduce or mitigate them
- ★ allow the public and other stakeholders to comment on the project and the EIA report
- ★ provide this information – the EIA report and the comments of the public and other stakeholders – to the decision-maker

The **UNECE Convention on Environmental Impact Assessment in a Transboundary Context** was negotiated to promote environmentally sound and sustainable development, while also enhancing international cooperation in assessing environmental impact,

in particular in a transboundary context. This it does by helping countries carry out an EIA when a project is likely to have a cross-border impact.



The Convention was the one of the first multilateral treaties to specify the procedural rights and duties of Parties¹ with regard to transboundary impacts of planned activities and to provide procedures for the consideration, in a transboundary context, of environmental impacts in decision-making.

The Convention was adopted in 1991 in the Finnish city of Espoo – and it is often called “the Espoo Convention”. The Convention entered into force, with 16 Parties, in 1997 and by 2009 had 43 Parties.

The Convention requires that an EIA be carried out for an activity planned by one Party, which is likely to have a significant environmental impact within an area under the jurisdiction of another Party. It specifies what has to be considered at an early stage of planning and it

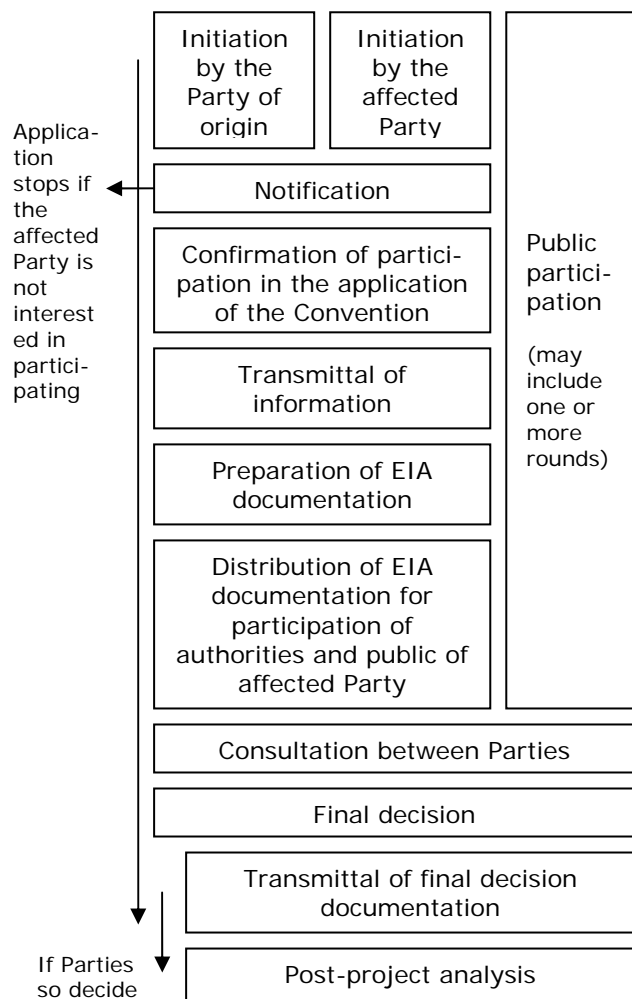
¹ A Party is a State that agrees to be bound by a treaty.

also lays down the obligation of countries to **notify and consult** each other and the public on all major projects that are likely to have a significant adverse environmental impact across borders. The key additions of transboundary EIA to domestic EIA (those not involving other countries) are thus:

- ★ Notification by the “country of origin” that a planned project might have transboundary impact
- ★ Response by the “affected country” indicating whether it therefore wishes to participate in the EIA procedure
- ★ Sharing of information
- ★ Consultation between authorities
- ★ Participation of the public in the affected country
- ★ While, at the same time retaining decision-making power in the country of origin, and not affecting the protection of information the supply of which would be prejudicial to industrial and commercial secrecy or national security

The stages of transboundary EIA according to the Convention are illustrated in this flowchart.

Flowchart of the stages of an assessment according to the Convention



Consultation between the authorities in the concerned countries is key to successful transboundary EIA.

Benefits of transboundary EIA

Transboundary EIA offers the benefits of EIA and more, with many benefits being enhanced through the inclusion of stakeholders from affected countries, by providing information and leading to changes in design:

- ★ Identification of the key environmental issues of a project, and awareness of the environmental consequences of project implementation
- ★ Improvement of project design, and higher standards of mitigation
- ★ Protection of the environment, including the avoidance of environmentally sensitive areas through project re-siting or re-design
- ★ Identification of project alternatives (alternative locations or technology, for example) and mitigation and compensatory measures that reduce the environmental impact of the project. Suggestions may come from the public, EIA experts, the developer and other stakeholders
- ★ Opportunities to consider climate change adaptation

By improving decision-making:

- ★ Better informed and more objective decision-making
- ★ A better framework for preparing conditions and legal agreements to govern future operation of the project
- ★ Public participation in government decision-making

And more generally:

- ★ Promotion of sustainable development in general
- ★ Promotion of good governance in the longer term, with public hearings providing “important indirect benefits that can contribute to the capacity for democratic governance and an active civil society” (Almer & Koontz)

- * Promotion of understanding between the community and developer
- * Promotion of standards
- * Enhancement of international cooperation, including awareness of the importance of the environment in such cooperation, and avoidance of conflict
- * Encouragement of new approaches
- * Enhancement of the developer's environmental credibility

Some specific examples of environmental benefits arising from application of the Convention include:

- * Environmental protection measures were added to, and made stricter for, interim storage facilities for spent nuclear fuel (Austria) and a flood protection project (Croatia)
- * Substantial environmental improvements were introduced into the design of a goldmine project (Kyrgyzstan)

Box 1 provides an example of benefits provided by a domestic EIA procedure.

Box 1: Example of domestic EIA benefits

An extension of the runway at Billund Airport (Denmark) was foreseen to reduce noise nuisance to the local community. As a consequence of the EIA, consultations and public participation, the project was revised to provide for new operating procedures without a runway extension. This resulted in:

- * € 40.4 million saved
- * 350 hectares of farmland and an old forest preserved
- * more than 2,000 people no longer exposed to noise above the recommended thresholds
- * number of homes exposed to noise reduced from 1,290 to 328
- * environmental approval of the airport published and no complaints lodged

Source: Press Briefing – *European Commission's 5 Years Report on Environmental Impact Assessment*, Brussels, 23 June 2003

Costs of transboundary EIA

EIA is a legal requirement in most States. The costs of carrying out a domestic EIA may therefore be taken as a baseline, but see Box 1.

Those projects subject to transboundary EIA are generally larger projects, so the percentage cost is often proportionally at the low end of the figures suggested in Box 2. The duration of transboundary EIA procedures is highly variable, but generally between one and three years, similar to "domestic" EIAs.

The extra costs associated with transboundary EIA may include:

- * Preparing and sending the notification
- * Preparing and broadcasting announcements (e.g. in the media)
- * Translation of documents into the language of the affected country
- * Translation of comments and opinions received from the affected country
- * Additional printing
- * Distribution of documents in the affected country
- * Organization of public hearings (hiring of hall, etc.)
- * Interpretation costs
- * Travel and accommodation
- * Fees charged by the competent authority in the affected country for the review of the EIA documentation, where applicable

Box 3 overleaf provides some real examples of the additional costs of transboundary EIA.

Box 2: Costs of domestic EIA

60-90% of the cost of an EIA is in carrying out environmental studies, and writing the EIA report. These costs are borne largely by the developer or project promoter.

Preliminary studies conducted in advance of the formal EIA are also a significant part of the developer's overall design costs, although these will usually be incurred whether or not EIA is required.

Except where fees are charged by the competent authority, the cost of reviewing the EIA, and reaching a decision on whether or not the project should proceed, falls chiefly on the competent authority, with some input from statutory consultees.

Generally EIA costs amount to less than 0.5 % of the overall capital cost. Costs in excess of 1% are unusual, and occur in relation to particularly controversial projects in sensitive environments, or where good EIA practice is not followed.

Actual costs of EIA tend to rise in direct relation to the capital cost of the project but, when considered as a percentage of total cost, the EIA component becomes smaller the larger the project and may be as low as 0.1%.

EIAs are generally completed in under 2 years. The EIA studies are usually conducted in 6-12 months. Where the proposed development is located in an environmentally sensitive area, data for a full year of observations should normally be provided, but this process can be shortened if the information is already to hand. Preparation of the EIA report typically takes 2-3 months. The subsequent stages of consultation, review and decision-making may take 3-6 months, depending upon the complexity of the issues raised. These timescales are indicative, and there is considerable variation from project to project.

Source: *EIA - A study on costs and benefits*, European Commission, 1996

How to enhance benefits and to reduce costs

These are some tips on enhancing the benefits and reducing the costs of transboundary EIA:

- ✓ Start early – make contacts early on, informally at first if appropriate.
- ✓ Scope carefully – focus on what's important. The lack of a proper scoping exercise to determine the direction and focus of the EIA is likely to cause delays later.
- ✓ Scope with others – the involvement, in scoping and preparing terms of reference, of the competent authorities and other stakeholders in the concerned countries helps to avoid nasty surprises later, as well as building relationships and understanding.
- ✓ Don't short-cut – make sure the study is adequate. The failure to undertake a systematic study, and provide relevant, or sufficient, data may result in the need for supplementary information causing delays.
- ✓ Translate enough – to avoid delays when more information has to be translated.
- ✓ Involve the public in the concerned countries as early as possible, preferably during scoping.
- ✓ Operate a strict timetable for each stage of the process, and formalize inputs from the various participants, to achieve a shorter timescale.

Find out more

To find out more about the Convention and transboundary EIA, contact the secretariat of the Convention:

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And visit the website www.unece.org/env/eia.

References

Benefits of Strategic Environmental Assessment, Brochure, REC and UNDP, 2003

EIA - A study on costs and benefits, European Commission, 1996 (Volume 1, Main report, ISBN 92-828-3572-3; Volume 2, Detailed case studies, ISBN 92-828-3573-1)

Guidance on Public Participation under the Espoo Convention, ECE/MP.EIA/7, UNECE, 2006

Public hearings for EIAs in post-communist Bulgaria: do they work? in *Environmental Impact Assessment Review*, 24 (2004), pp. 473-493, Almer, H.L., & T.M. Koontz, 2004

Second review of implementation of the Espoo Convention, Draft, UNECE, 2007

Box 3: Examples of transboundary EIA additional costs

- * The cost of public participation in a project for a power line from Muhos to Torneå (Finland) was €8,000-10,000.
- * The total cost of organizing all public participation in the impact assessment procedure for the Baku-Tbilisi-Ceyhan and South Caucasus pipelines was US\$ 1.5 million. The total cost of these projects is about US\$ 5 billion.
- * The costs of public participation in the transboundary EIA of a planned paper mill ("Complant") in Kyrgyzstan were US\$ 2,000 in Kyrgyzstan and US\$ 500 in Kazakhstan.
- * For the multipurpose hydropower system on the Drava River, Croatia, the cost of preparing, printing and distributing booklets in the affected Party was about €6,000; the cost of the public hearing was €10,000 (including leaflets, transport and interpretation). The total project cost was estimated at €500 million.
- * For the Nuclear Power Plant ("Loviisa-3") in Finland, the proponent produced 100 booklets in Russian (total cost €1,500) and a non-governmental organization (NGO) organized public participation in the Russian Federation (€500). The power plant is expected to cost about €3 billion.
- * For the Danube River crossing, between Vidin (Bulgaria) and Calafat (Romania): each participant from the relevant authorities in both countries, from NGOs and from the concerned public paid their own participation cost; document translation was organized by the developer; and local municipalities covered the costs of public hearings and associated Romanian/Bulgarian interpretation. The total cost of the project is expected to be €236 million.
- * The cost of translating and copying the EIA documentation of a planned large-scale dredging operation in the English Channel was around £50,000; advertising in local newspapers cost another £5,000. The competent authority met the cost of advertising nationally (£200).

Source: *Guidance on Public Participation under the Espoo Convention*, UNECE, 2006

Photograph courtesy of Nune Darbinjan. Illustration courtesy of Jonatan Hildén.

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