

How to misuse the EIA-tool – a Swedish example

1. Introduction

Environmental Impact Assessment (EIA) was developed to meet the growing environmental problems, which had attracted significant attention in the 1960s [1-3]. It has its origin in the US National Environmental Policy Act (NEPA), of 1970. Federal activities that could lead to significant negative environmental consequences should be highlighted and appropriate alternatives assessed. This instrument consists of a document, the Environmental Impact Statement (EIS), and a process. The NEPA process, as it later was called, was the first successful environmental and holistic decision making orientated process [4], and it became the world wide role model for EIA legislation. It influenced the laws in the European Union (EC law) and the Swedish legislation before Sweden joined the EU [5].

2. EIA in Swedish legislation

The EC law became mandatory in Sweden after the EEA (European Economic Area) agreement was signed in 1991 [6]. An incomplete model of EIA entered Swedish legislations in 1987, when the Road Law included some EIA requirements [7]. In 1991, when the Natural Resources Act (NRL) was updated, it was decided that EIS should be part of permit applications [2]. It took until 1999, when the Swedish Environmental Code came into effect, for EIA to be implemented in a more complete way in Swedish legislation [8].

The initial EIA directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 2011 [9]. As the requirements for alternatives is the focus in this, article 5 in this directive, states that *the information to be provided by the developer shall include an outline of the main alternatives studied by the developer and the main reasons for the developer's choice, taking into account the environmental effects.*

According to chapter 6 in the Swedish Environmental Code [10], *shall an EIS, relating to an activity or measure that is likely to have a significant environmental impact, contain the information that is needed for the purpose of the EIA. The EIS shall always include a description of possible alternative sites and alternative designs, together with a statement of the reasons why a specific alternative was chosen and a description of the consequences if the activity or measure is not implemented (the zero-alternative). If it is decided that the activity or measure is likely to have a significant environmental impact, it may be required within the scoping that a report, describing similar ways of achieving the same purpose, is submitted with the description of alternative designs.*

The requirements for alternatives reflect something very essential in the EIA instrument. It was one of the most important contributions with the EIA legislation. The manner in which this instrument has been used reflects, however, in many ways a departure from the original intentions of the EIA instrument and the law.

3. EIA in practice

In this article the use of the EIA instrument in Sweden is analysed, and focus is on requirements for alternatives to the proposed action. The guiding court cases that were decided on in the years 2008-2012 and the EIAs belonging to those cases from the years 2006-2008 were analysed in the study. The following cases are highlighted 1) construction and operation of a cogeneration plant 2) expansion of a port, including construction and operation and 3) storage of hazardous waste.

Case 1: The proponent, Eslöv and Lund Kraftvärmeverk AB, an energy company owned by three local communities, applied in 2006 for a permit to construct and operate a cogeneration plant, with a total effect of 185 MW, in Örtofta in southern Sweden [11, 12]. Below is a short summary of how the requirements for alternatives were met.

The proponent's statements about alternatives:

- The proposed main alternative is stated to handle multiple fuels: bio fuels, waste wood, and peat.
- The zero-alternative would, as stated in the application, mean operation according to current conditions, at the existing plants using mainly fossil fuels. Existing production is based on heat pumps, fuel oil, natural gas, waste wood and waste heat.
- Regarding optional alternatives, the proponent referred to a site-investigation made in 1995 for a planned expansion of a plant in a nearby town.
- Furthermore, the proponent just mentioned possible technology alternatives, three kinds of plant boilers, without further words.

First instance for the application:

The Land and Environment Court approved the EIA, and stated localisation, according to the main alternative, to be acceptable, and issued a permit. The decision was appealed by nearby residents.

Second instance:

The Land and Environment Court of Appeal stated that the report of the investigated alternatives were more than ten year old, and made for another purpose. The Court further stated: "Since then conditions has changed significantly." The Court stated that the investigated alternatives were not applicable, due to the objections earlier raised by the proponent. Furthermore the Court stated that: "The proponent has not showed that the proposed location alternative is one, where the purpose can be achieved with minimum impact on human health and the environment" [p.8, 12]. The decision in the first instance was overruled and the application was dismissed.

The site-investigation, which the proponent referred to, was made according to a former law, the Natural Resources Act. The need for the plant was vaguely described, since the proponent stated that existing plants would decrease their production. The fact that impacts are only described for the proposed activity means that it was not possible to balance

alternatives, and judge if the proposed alternative, was the best possible one. Despite this, a permit was issued in the first instance.

Case 2: Stockholm Hamn AB applied in 2007 for a permit to construct and operate a freight port for rolling goods and container traffic in Nynäshamn, south of Stockholm [13, 14].

The proponent's statements about alternatives:

- The proposed main alternative is designed to be a port area of 60 hectares and with a capacity of 10 million tonnes of goods per year. The application concerned blasting, dredging, disposal of dredged material, water operations, operation of the port, and noise levels.
- The zero-alternative, as stated in the application, would mean that no port was built. Existing ports, roads and railway would be used for transport of goods, which is stated to likely increase congestion on roads and railways.
- Regarding optional locations alternatives, the proponent stated them to be hypothetical and implied development of other existing ports in Sweden.
- Furthermore, it was stated that in order to balance alternatives, there would be a need for an impact assessment of alternatives. However, it was further stated, that this would be impossible for the proponent to do!

First instance for the application:

The Land and Environment Court stated that the EIA was insufficient regarding alternative locations. The selected site was not proved suitable. The Court decided, however, with regard to the supplements the proponent had made, and the investigations that the competent authorities and others submitted to the Court, that they could proceed to take a decision. The application was dismissed. The decision was appealed by the proponent.

Second instance:

The Land and Environment Court of Appeal stated that, "the EIA can be a basis for the decision." It then stated, that the EIA had not put forward a more suitable site than the proposed alternative. In an overall evaluation the second instance found that the proposed activity could be permitted according to the Environmental Code chapter 2, general rules of consideration, regarding appropriate location.

The case shows that the need for the proposed port was vaguely analysed. A proper impact assessment was left out both for the technology and location alternatives and the zero-alternative. Despite this, a permit was issued.

Case 3: Reci Industri AB applied in 2008 for a permit for temporary waste storage in Stenungsund, on the west coast of Sweden [15, 16]. The proponent has not before been tried for a permit for their existing operations.

The proponent's statements about alternatives:

- The proposed main alternative is stated to be 290 tonnes of hazardous waste in tanks, 90 tonnes hazardous waste in containers and non-containerised, and 60 tonnes of non-hazardous waste. The activity today has tanks for deposit of fluid hazardous waste and a shed for solid hazardous waste.
- The zero-alternative would, lead to more transportation to other plants outside the region, since this alternative would mean that the proponent would be out of business. The proponent does not explain why this is the case.
- Regarding optional locations alternatives, the proponent stated that, due to their existing plant, it would not be economically reasonable to increase the activity at another site, as that would affect a new area and the need for new infrastructure – garages, offices and other buildings.
- Furthermore, the proponent stated that a temporary waste storage could be sited at the proponent's property in another town. However, that alternative was said not to be defensible either from economical or environmental aspects, as full loading capacity could not be exploited.

First instance for the application:

The Environmental Assessment Delegation at the County Administrative Board requested a supplement of the EIS with alternative locations. No supplement came from the proponent. Permit was, however, issued. The decision was appealed by the local municipality.

Second instance:

The Land and Environment Court stated that the first instance underlined that "the EIA should contain a description of alternative locations". The Court wrote that the proponent's EIA was so poor that first instance should have dismissed the application. The Court overruled the decision of the first instance and dismissed the application. The decision was appealed by the proponent.

Third instance:

The Land and Environment Court of Appeal issued the decision of the second instance.

In this case, we can see that an impact analysis is left out for the zero-alternative. Despite a request for supplements of the EIA with alternative location, which were never sent in, the first instance issued a permit. This was appealed and later overruled.

4. Concluding remarks

The EIA-tool really changed the prerequisites for getting consent for environmental hazardous activities. This collided with the old ways and made it hard for many proponents, agencies, courts, politicians and others to really understand the new order of things. In

Sweden these difficulties have become visible both within the law itself and how the law has been and are in relation to practise. This deficiency is reflected not least regarding requirements for alternatives and the enforcement of these requirements.

The early environmental law in Sweden was characterised by insistence on the former law based on tradeoffs thinking [17]. There was a lack of understanding of the new legal framework NEPA represented. The history can be seen in EIA practice. Sweden has a long history of planning legislation, which not required alternatives. Decisions were made on best possible location. The Swedish legislation still focuses on a subjective assessment concerning reasons why a specific alternative was chosen instead of objective open-ended alternatives that would fulfil the same purpose. The case study shows that permits can be approved, despite an insufficient EIA with no real alternatives, on the basis that no other alternative had been proved suitable.

The concept of the reverse burden of proof is not fully in practice. It is up to the proponent to prove that the most suitable alternative has been chosen. The proponent has the burden of proof in relation to alternatives. It should be possible to carry out the intended activity at the alternative locations. The case study shows that it seems to be common practice only to include alternatives within the proponent's scope.

The presented cases show that proponents have a very poor understanding of how to present alternatives. It is not possible for the decision maker to assess if the proposed activity is the one best achieving the needs of society, in other words fulfilling the underlying purpose e.g. transport of goods, in relation to other alternatives when the presented alternatives are no real alternatives.

Another deficiency is the fact that the EIA is not separately evaluated. In case two, the first instance neither approved nor disapproved the EIA. The second instance argued that, since the first instance had made a decision, the Court had accepted the EIA. The second instance then stated that the EIA, with its supplements and adjustments, met the requirements of the Environmental Code. Since the first instance not issued a permit, the EIA was not evaluated. This later became a problem when the first decision was overruled.

The licensing authorities and Courts seem at times arbitrary and incomprehensible. There seems to be a lack of understanding or ignorance of what requirements for alternatives really is. Alternatives are at times asked for, but seem not to be mandatory.

EIA entered Swedish legislation step by step. This legal instrument could be sufficient when all parts of the Environmental Code are considered, but practice show that EIA is not used to its full potential. If the possible options, alternatives, are not known and taken into consideration when the decision maker takes the decision, this instrument cannot fulfil the needs as base for decision to steer towards sustainable development.

5. References

1. Clark, R. and L. Canter, *Environmental Policy and NEPA*. 2000, Boca Raton, Florida: St. Lucie Press.
2. Carlman, I., *Mycket kom bort när MKB skulle införas i Sverige [Much was lost when EIA was to be implemented in Swedish Law]*. Miljörättslig tidskrift [Environmental Law Journal], 1995(1): p. 43-73.
3. Westerlund, S., *Miljöeffektbeskrivningar 4, Del 1 om miljöeffektbeskrivningar och om reglerna och tillämpningen i USA [Environmental impact assessments 4, Part 1 on environmental impact assessments and the regulations and practice in USA]* 1981, Stockholm: Naturresurs – och miljökommitten.
4. Westerlund, S., *Miljörättsliga grundfrågor 2.0 [Fundamentals of Environmental Law Methodology 2.0]*. IMIR Institutet för miljörätt. 2003, Björklinge, Sweden: Åmyra Förlag.
5. Westerlund, S., *Genuine Environmental Impact Assessment (EIA) and a Genuine EIA Concept*, in *Miljøkonsekvensvurdering – i et retligt perspektiv [Environmental Impact Assessment - a Legal Perspective]*, E.M. Basse, Editor. 1996, GadJura: Kopenhagen. p. 101-128.
6. Westerlund, S., *Utrednings- och bevisfrågor [Research questions and evidence]*. Miljörättslig tidskrift [Environmental Law Journal], 1999(2-3): p. 299-342.
7. Carlman, I. and S. Westerlund, *Miljøkonsekvensbeskrivningar – forskning och utveckling [Environmental Impact Assessments - research and development]*. Miljörättslig tidskrift [Environmental Law Journal], 1994(2): p. 196-253.
8. Lindblom, U. and J. Rodéhn, *MKB-tillämpningen i Sverige - Antalet MKB för verksamheter och åtgärder 2005 och 2006 [Implementation of EIA in Sweden - The number of EIA for operations and activities in 2005 and 2006]*, in *Rapporter Institutionen för stad och land 2008*, Swedish EIA Centre: Uppsala, Sweden.
9. *Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment*, 2011, The European Parliament and the Council of the European Union.
10. *Miljöbalk (1998:808) med ändringar (tom 2012:907) [Environmental Code (1998:808) with amendments (until 2012:907)]*, 2012.
11. *Miljøkonsekvensbeskrivning - Anläggande och drift av ett fastbränsleeldat kraftvärmeverk i Örtofta [Environmental impact statement - Construction and operation of a solid fuel-fired power plants in Örtofta]*, 2006: Malmö, Sweden. p. 1-93.
12. *M471-08*, 2008, Mark- och miljööverdomstolen [Land and Environment Court of Appeal].
13. *Miljøkonsekvensbeskrivning - Anläggande och drift av hamn på Stockholm-Nynäshamn, Norvikudden [Environmental impact statement - Construction and operation of the port at Stockholm-Nynäshamn Norvikudden]*, 2007: Stockholm, Sweden. p. 1-107.
14. *M10319-09*, 2010, Mark- och miljööverdomstolen [Land and Environment Court of Appeal].
15. *Bilaga 6, Miljøkonsekvensbeskrivning - Angående Reci Industri AB:s ansökan om tillstånd enligt miljöbalken på Näs 1:226, Ödsmål [Appendix 6, Environmental impact statement - On Reci Industri AB's application to approve construction on the property Näs 1:226, Ödsmål]*, 2008: Göteborg, Sweden. p. 1-23.
16. *M5005-11*, 2012, Mark- och miljööverdomstolen [Land and Environment Court of Appeal].
17. Westerlund, S., *Rätt och riktig rättsvetenskap [Law and correct legal science]*. Nordisk Miljörättslig tidskrift [Nordic Environmental Law Journal], 2010(1): p. 3-22.