

GUIDELINES FOR IMPACT ASSESSMENT METHODS
TO BE USED BEFORE THE
ENVIRONMENTAL IMPACT REVIEW BOARD

Prepared

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Introduction

The Environmental Impact Review Board (EIRB) wishes to ensure that proponents of projects to be reviewed by the Board use appropriate Impact Assessment Methodologies for evaluating the potential environmental and social effects of their projects. The Board recognizes that the techniques of impact assessment are evolving and that certain methodologies are more appropriate for some types of projects than for others. Thus, the board wishes to allow proponents flexibility in selecting impact assessment methods to be used. However, there are certain elements of an assessment that the Board considers to be essential to its review of projects. To ensure that proponents are aware of this elements, the Board is issuing the following Guidelines that describe them.

It is intended that these Guidelines will evolve as experience is gained with different types of projects at various public reviews. In addition, it is expected that impact assessments methods will continue to develop and that some of these new developments will be incorporated into the Board's Guidelines. The process for a particular public review is described in the next paragraph.

Reviews by the EIRB occur on projects that are referred to it by the Environmental Impact Screening Committee. Once a project is referred to the Board, the latest version of the Guidelines would be given to the proponent. After reviewing the guidelines, the proponent and the Board's staff would meet to discuss them to ensure that the proponent selects an approach to impact assessment that satisfies the requirements of the Board. This meeting is designed to ensure that the subsequent review by the Board can focus on real projects rather than getting bogged down in debates about methodology.

The Guidelines

The following Guidelines regarding impact assessment methodologies are designed to give the proponent flexibility in selecting a suitable approach while, at the same time, ensuring that the Board's requirements are met. The Guidelines list the topics that the Board wishes to have addressed but they do not specify precise methods to be used.

1. Focus the assessment on the most important effects of the project (e.g. project effects in a harvesting area for beluga whales is important whereas local effects on a lemming population are not). The EIRB considers that the identification of Valued ecosystem components (VECs) and valued Social Components (VSCs) is a useful approach for focusing the assessment on the important issues. The concept of valued components was first introduced by Beanlands and Duinker (1983); it has been used in several assessment since then.
2. Identify and describe all of the project's activities that could affect the biological or social environment. It is important to be systematic to ensure that all possible project activities and combinations of project activities are identified and addressed throughout the assessment. Several approaches can be used to identify the relevant project activities; the approach developed by Duval and Vonk (1991) is a good example.

3. Mitigation measures to be used to reduce the potential negative effects of a project should be identified as part of the impact assessment. Measures that are built into the design of the project can be included in the discussion of project activities. For example, a proponent may decide to muffle the compressors along a pipeline in order to reduce the noise at a traditional hunting camp or a caribou calving area. If this is designed into the project, then only the effects of the muffled noise need be addressed. On the other hand, mitigation measures that require actions or responses by the proponent should be explicitly identified and the project's effects, with and without these mitigation measures should be determined. The likelihood of successful implementation of mitigation measures should be addressed (e.g. responses to oil spills).

Descriptions of mitigation measures should be specific. General statements such as "Supply ship operations will be modified if whales are seen in the area" should be avoided. It is necessary to know how the presence of whales will be determined and how the ship operations will be modified before the effectiveness of this mitigation measure can be evaluated.

4. The list of VECS and VSCs should be combined with the list of project activities to produce an interaction matrix that identifies all possible interactions between the project activities and the valued environmental and social components. This matrix serves as a checklist to ensure that all possible interactions are addressed.
5. Determination of the probable effects of the project should be based on the most up to date literature and the relevant reference should be cited. It is recognized that many conclusions about project effects will be based on the professional judgement of experienced scientists. This is acceptable but such conclusions should be clearly identified, the basis for each conclusion should be given, and the scientists involved should be identified.
6. Definition of levels of predicted impact should be as explicit as possible. Vague terms such as minor, moderate and major should be avoided or they should be clearly defined in terms of the numbers of individuals that will be affected. It is recognized that impact predictions can rarely be precisely quantified. However, the definitions of levels of impact can and should be precise and explicit so that all readers have the same understanding of the levels that are used.
7. Although, it will be up to the Board to determine which predicted impacts are considered to be significant, the Board wishes the proponent to define criteria for determining significance and to make a determination of the significance of the predicted effects. It is important that the criteria used by the proponent be clearly defined so that the reviewers understand the basis for the determination.
8. Elements that might be considered when evaluating the significance of effects include, but are not limited to, the type of effect, the numbers of animals affected, the proportion of the population affected, the proportion of the available habitat affected, the duration of the effects, the recovery potential of the population and, the reversibility of the effects. When

determining the proportion of a population that is effected by a project, it is important to define the population that is being considered and it is desirable to consider local populations. For example, rather than considering only the entire Beaufort Sea population of beluga, consider also the population frequenting the drilling location. The EIRB wishes to minimize effects on local populations. Consideration of large regional populations is often irrelevant and can lead to consistently low estimates of the proportions of populations that are affected by a project.

9. It is important that the impacts from routine project operations be clearly distinguished from impacts caused by accidents or unplanned activities. The former will occur whereas the latter may or may not occur.
10. A large project may have several activities that affect a particular species. The cumulative effects of all these activities should be considered. The proponent is also invited to consider the cumulative effects of the project combined with other projects in the Settlement Region.
11. The main assessment document should be concise and well written. It should provide Board members with enough information to fully understand the project and its probable effects. Large amounts of technical supporting data can be relegated to appendices.
12. Because impact assessments are usually complicated undertakings that integrate data, conclusions and opinions from a wide variety of sources, it is important that efforts be made to fully document the sources used in the resulting reports. Several approaches are available, including the concept of the Audit Trail developed by Duval and Vonk (1991).
13. Section 13(11) of the Inuvialuit Final Agreement requires the EIRB to estimate the potential liability of a proponent determined on a worst-case scenario. A section of the IEE should be given the proponent's views as to what is the resulting liability to the proponent. Work done by Task Group 1 of the Beaufort Sea Steering Committee (1991) will be a useful reference and starting point for such a calculation.