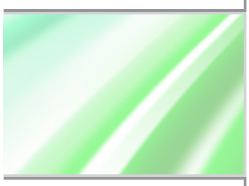
IAIA

International Association for Impact Assessment

Assessing Significance in Impact Assessment of Projects

Assessing the significance of an impact is to ask if it is acceptable in the environmental and social context of a project.



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FASTIPS

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A mining project would take up habitat that is part of the home range for local deer. The habitat would be lost for the duration of mining and some rehabilitated after closure. Is this impact acceptable or not? In IA terms, this is the "significance" question. Significance frames the question in terms of benchmarks or thresholds beyond which an impact could be considered unacceptable in the environmental and social context of a project. Assessments of impact significance are central to IA and to decision-making about projects.

Authorities that mandate IA usually prescribe what factors need to be considered in assessing significance (see, for example, CEA Agency 2015 and CEQ 1979). These factors include the "physical" characteristics of an impact as well as "value" characteristics of the environmental context of the impact. Methods for assessing impact significance based on these characteristics are typically not prescribed. Matrices and decision trees that lead to a significance determination using various combinations of physical factors are common, but are typically generic and ignore the context of impacts. Clear statements of what constitutes a significant impact based on both their physical and value characteristics are essential for capturing the full meaning of significance, and require thoughtful consideration of the project context.

All significance assessment methods should define criteria for determining whether an impact is significant, based on the characteristics of an impact, in a clear and unambiguous manner that can be understood by anyone reading an IA report. The criteria should be based on both the physical characteristics of an impact (e.g., magnitude, areal extent, duration, frequency, likelihood and reversibility) *and* the context-specific value characteristics (e.g., ecological, social, cultural, public health, and economic values) that adhere to the affected environmental component in the region of a project, and perhaps more broadly. Regulatory standards and the results of stakeholder consultation are usually essential factors in defining value characteristics. The assessment method should define the assessment boundaries for particular environmental components since what may be considered a significant impact in the immediate vicinity of a project (e.g., to the deer population or to the people who harvest deer for food in the project area) may not be considered significant, ecologically or socially, in the context of the larger region around a project (e.g., where there may be regionally extensive habitat and a large, secure deer population available for hunting).

Significance is normally assessed assuming the implementation of planned mitigation measures – that is, features of a project intended to avoid or minimize adverse impacts (e.g., treating discharge water from a mine), compensate for unavoidable impacts (e.g., resettling displaced people or replacing lost fish habitat), or enhance positive impacts (e.g., training local people for employment).

Several approaches to establishing criteria, not necessarily mutually exclusive, are possible, sometimes for the same environmental component. For example:

- Whether established laws, regulations, standards or objectives (e.g., for air or water quality) will be contravened;
- Whether the sustainability of a habitat type or population will be jeopardized; and
- Whether objectives for community service levels (e.g., student/teacher ratios in local schools) will be breached.

Assessments of impact significance are value-dependent. While they are informed by science, they are subjective to some degree and made within the socio-cultural, economic and political context of a project. Since controversies over projects are typically not about the facts of potential impacts, but over what values prevail in decision-making, significance criteria should strive to reflect the values of public and private stakeholders in a project. Project approval decisions are informed by impact significance assessments but are ultimately political in most jurisdictions.

FIVE IMPORTANT THINGS TO KNOW

1. Assessments of significance should be based on clear, unambiguous criteria.
2. Significance criteria take into account both the facts of an impact and the values adhering to the affected environmental component.
3. Significance is always context-specific, and criteria should thus be developed for each project and its setting.
4. Several approaches to establishing significance criteria are possible, sometimes for the same environmental component.
5. Project approvals are political decisions informed by IA significance assessments.

FIVE IMPORTANT THINGS TO DO

1. Define environmental components for significance assessment that reflect what is valued in the environment by regulators and by public and private stakeholders.
2. Establish an assessment boundary for each environmental component that reasonably encompasses the area in which the component is valued and an impact may be significant.
3. Take the time needed to define clear, unambiguous significance criteria that reflect the setting of a project.
4. Ensure that the criteria reflect the values of public and private stakeholders in a project.
5. Ensure that technical data collection and analyses focus on the information needed to apply the criteria and assess the significance of impacts on valued environmental components.

FURTHER READING

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