## EIA effectiveness and decision-making

### Introduction

EIA identifies and evaluates the potential environmental consequences of a proposed development, which then aids in sustainable decision-making. The quality of decisions made is highly dependent on how effective the EIA process has been especially in the key EIA stages (consideration of alternatives, public participation, mitigation and monitoring) that have the potential to influence decision-making. Measuring EIA effectiveness is a subjective process, but has been widely refined to: Procedural, Substantive, Transactive and Normative effectiveness.

Procedural effectiveness is when an EIA has followed the established rules and regulations. Sometimes EIA processes are not as effective as intended due to flaws in legislative and procedural frameworks. Substantive effectiveness is based on whether an EIA achieves its purpose. The nature of this approach makes it difficult to quantify, but going back to the roots of EIA, its purpose is to contribute to sustainable development through minimising damage to the environment. Transactive effectiveness is when an EIA is completed at the least cost and in the most time efficient way. Normative effectiveness is related to the principles and behaviours a society agrees with.

### Effectiveness in Key EIA Stages

The ‘consideration of alternatives’ stage of EIA influences decision-making through the assessment and selection of an alternative with the least environmental impact.

The Town and Country Planning (EIA) Regulations 2017 require a developer to provide a description of reasonable alternatives studied which are relevant to the proposed project and its characteristics. However, there is a lack of a systematic approach and guidance for how these alternatives should be identified or assessed. This often results in decreasing substantive and normative effectiveness of an EIA due to subjective alternatives being considered by developers, which undermines the EIAs ability to examine trade-offs among alternatives that may have a lesser environmental impact. This can be linked to pressures of maintaining transactive effectiveness, which can constrain the developer in considering alternatives in detail, and the early involvement of the public to influence the adequate identification of alternatives.

‘Public participation’ is an integral part of EIA as it provides inclusion and discussion of issues with the public and is often used to legitimise decision-making. The first opportunity for involvement of the public occurs once developers and decision-making authorities have begun the EIA process through notice of a project proposal and submission of a scoping report. The late involvement of public in the EIA process can lead to ineffective input as potential environmental impacts of a project are identified in isolation from those who are most familiar to the locality in question. Legislation is needed to encourage early involvement of the public to increase procedural and normative effectiveness of the EIA process. Recognising conflicting views and attempting to resolve them before any decision-making takes place can lead to cost and time reduction increasing the transactive effectiveness of an EIA.
'Mitigation' consists of proposing effective measures to help address any adverse environmental effects. Incorporating effective mitigation measures can create project support from the public, which increases normative effectiveness. The EIA regulations require authorities to impose where appropriate measures to monitor any significant adverse environmental effects. ‘Monitoring’ is the only process that further checks on a project’s status post-decision stage and this procedural requirement ensures that the EIA process effectively addresses the significant environmental impacts of the project, thus achieving substantive effectiveness. However, this procedural requirement puts resource and cost pressures on developers to meet monitoring requirements and authorities who would need to track monitoring requirements, thus decreasing transactive effectiveness.

Improving EIA effectiveness

The approaches to measuring EIA effectiveness discussed have different perspectives on what constitutes an effective EIA. Procedural improvements to promote effectiveness can ensure adherence and maintain order over the EIA process. Understanding how the EIA process influences sustainable decision-making can contribute to improving substantive effectiveness. Reduction of time and cost through improvement and efficient management of EIA processes can improve transactive effectiveness. Normative effectiveness can be improved through the greater integration of people’s beliefs and values with the EIA process. Acknowledging and analyzing the interdependencies of the approaches would aid in developing solutions to enhance EIA effectiveness.

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