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SABUJEEMA

An International Multidisciplinary e-Magazine

Volume 1| Issue 6 | September, 2021

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sabujeema-international multidisciplinary-e-magazine

Volume 1 - Issue 6 – September, 2021
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An International Multidisciplinary e-Magazine

A STUDY ON ENVIORMENTAL IMPACT ASSESSMENT (EIA)

[Article ID: SIMM0127]

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ABSTRACT

Environmental Impact Assessment (EIA) can broadly be defined as a study of the effects of a proposed project, plan or program on the environment. The legal, methodological and procedural foundations of EIA were established in 1970 by the enactment of the National Environmental Policy Act (NEPA) in the USA. At the international level, lending banks and bilateral aid agencies have EIA procedures that apply to borrowing and recipient countries. Most developing counties have also embraced and are in the process of formalizing EIA through legislation. The paper highlights the evolution to current status, the legal framework, concepts, processes and principles of EIA and associated studies.

INTRODUCTION

Environmental Impact Assessment (EIA) is the formal process used to predict the environmental consequences (positive or negative) of a plan, policy, program, or project prior to the decision to move forward with the proposed action. Formal impact assessments may be governed by rules of administrative procedure regarding public participation and documentation of decision making, and may be subject to judicial review. An impact assessment may propose measures to adjust impacts to acceptable levels or to investigate new technological solutions. It is anticipatory, participatory, and systematic in nature and relies on multidisciplinary input (Glasson, Therival, & Chadwick, 1994). An environmental impact assessment (EIA) is commonly described as an assessment of the impact of planned activities on the environment, including impacts on biodiversity, vegetation and ecology, water, and air. An EIA can be seen as a process of identifying, predicting, and evaluating the likely environmental, socioeconomic, cultural and other impacts of a proposed project or development to define mitigation actions—not only to reduce negative impacts but also provide positive contributions to the natural environment and well-being. Essentially, an EIA is designed to identify the potential risks of a project (e.g., infrastructure development such as a dam) to environmental and human well-being and identify measures to eliminate and/or mitigate these risks. This can be done by replacing and/or modifying planned activities to reduce impacts. In this context, an EIA can be seen as an information-gathering activity by the project proponent to outline (and if possible quantify) the risks, impacts and mitigation actions built into the project's

whole lifecycle from design to closure so that decision makers are fully informed when approving the project. EIAs are carried out in a wide variety of sectors, including agriculture, manufacturing, tourism, mining and forestry. Projects requiring an EIA can be large, such as a hydroelectric dam, or small, such as a new hotel on a beach. However, the level of impact on human and environmental health—rather than the size of the project—is the most important aspect of decision-making on the need for an EIA.

NECESSITY OF EIA

Human well-being is closely connected to environmental sustainability. As a result, all forms of human development such as building infrastructure (i.e., roads and pipelines, mines, and tourism facilities etc.) have an impact on the surrounding natural environment and vice versa. This is evident when we consider the results of large-scale development like open-pit mines, hotels for thousands of people and large hydroelectric dams that often have irreversible impacts on the environment and the livelihoods of people because of large-scale deforestation, excessive water use, habitat destruction and resettlement. Because of the complex relationship between the natural and human environments, it is very important to try to predict the environmental and social impacts of programs, projects and planned developments that may alter the quality of the environment and impact well-being. As the human population continues to increase and natural resources become more limited, the importance of improving the sustainability of development and identifying mitigation measures—and thus the importance of creating high-quality EIAs—becomes greater.

OUTCOME

The final product of an EIA is an Environmental Statement or Report. The EIA report provides information to decision makers prior to issuing an operating licence so they can properly assess the project's impacts on both the environment and people. Therefore, the report needs to be based on accurate and relevant information that accounts for diverse impacts and cumulative effects of the planned project's life cycle. The ultimate audience of the EIA report is the decision makers: it aims to help them decide whether to accept the project as it is, ask for revisions in the project or reject it. There are also wider outcomes associated with an EIA. It should lead to better standards of development, and in some cases, limit development completely in sensitive areas. Where developments do go ahead, environmental assessments should help propose proper mitigation measures. When done well, an EIA can help stimulate growth and production in the local economy while promoting sustainability. In this context the specific contributions of the EIA can be listed as follows

- Ensure that environmental considerations are explicitly addressed and incorporated into the development decision-making process.
- Anticipate and avoid, minimize or offset the adverse significant biophysical, social and other relevant effects of development proposals.
- Protect the productivity and capacity of natural systems and the ecological processes which maintain their functions.
- Promote development that is sustainable, optimizing resource use and management opportunities

ASSESSMENTS RELATED TO EIAS

Beyond EIAs, there are other types of environmental assessments that are used to identify and eliminate the harmful environmental impacts of projects, investments and other activities. These include Strategic Environmental Assessments (SEAs) and Integrated Environmental Assessments (IEAs). • Strategic Environmental Assessments (SEAs) (sometimes referred to as Environmental Assessments [EAs]): An SEA is a systematic decision-making process done to analyze the environmental and human health effects of a proposed development activity. This process is conducted prior to the environmental impact assessment and determines the EIA's scope, depth of analysis and types of public participation and consultation to be integrated into the plan. Public participation and consultation are essential aspects of this process and should be integrated at every step of the EA process where possible (United Nations, 2012). • Integrated Environmental Assessments (IEAs): An IEA is a process of producing and communicating future-oriented, policy-relevant information on key interactions between the natural environment and specific human activities (IISD & UNEP, 2008).

OBJECTIVES

The objective of environmental impact assessment is to offer information to decision makers concerning matters that may be brought about as a result of decisions relating to a new project, program, plan or policy. Environmental impact assessment must realize decision-making based on the inputted information including potentially important factors and it must be beneficial for both the proponent and the citizens. Furthermore, environmental impact assessment is a technique that presents in a systematic manner a technical assessment of impacts on the environment that the project is likely to cause and explains the significance of predicted impacts and as a result, it indicates the scope for modification or mitigation. Finally it makes the concerned ministries/agencies assess the potential results of the project before a decision is given. Project developers and administrative agencies who have a responsibility for environmental consideration can use environmental impact assessment technique to improve the quality of both the project plan and decision-making by identifying possible effects in the early stages. The specific objections of the environmental impact assessment system are as follows:

I. To disclose significant environmental effects of proposed projects to decision-makers and the public.
II. To identify ways to avoid or reduce environmental damage.
III. To prevent adverse environmental impacts by requiring implementation of feasible alternatives or mitigation measures.
IV. To disclose reason of approvals for the projects with significant environmental impacts to the public.
V. To foster interagency co-ordination.
VI. To enhance public participation.

BENEFITS OF THE EIA PROCESS

Potentially screens out environmentally-unsound projects - Proposes modified designs to reduce environmental impacts - Identifies feasible alternatives - Predicts significant adverse impacts - Identifies mitigation measures to reduce, offset, or eliminate major impacts - Engages

and informs potentially affected communities and individuals - Influences decision-making and the development of terms and conditions

CONCLUSION

EIA certainly has a crucial role to play in addressing environmental issues surrounding project development and especially power projects. The integration of environment into development planning is the most important tool in achieving sustainable development. Environmental protection and economic development must thus be dealt with in an integrated manner. EIA process is necessary in providing an anticipatory and preventive mechanism for environmental management and protection in any development. Several developing countries are still at the infancy stage of operationalization of their EIA processes. The need for capacity building for quality EIA is also eminent in these countries.

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