

# ENVIRONMENTAL IMPACT ASSESSMENT A TOOL FOR SUSTAINABLE DEVELOPMENT

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### **Environmental assessment overview**

Environmental Impact Assessment (EIA) has a history of over two decades. The philosophy and practice of EIA have been incorporated into legislative and administrative systems across the world. Its acceptance does not only reflect the desire and necessity to integrate environmental considerations into decision-making, but also the relative simplicity and flexibility of the approach. However, this integration has been limited, both in terms of the scope of application and in the effectiveness of practice.<sup>1,2,3,4</sup>

The international activity related to the promotion of environmental protection has initiated new management tools, such as environmental auditing, product assessment and life-cycle analysis. Existing tools, primarily developed for other purposes, such as risk assessment and cost-benefit analysis are widely used for environmental decision-making.

### **Environmental impact assessment objectives**

The following definition gives an early example of the objectives of the EIA: "an activity designed to identify and predict the impact on the biogeophysical environment and on man's health and well-being of legislative proposals, policies, programmes, projects, and operational procedures, and to interpret and communicate information about the impacts."<sup>3</sup>

Basically, EIA is an iterative assessment and decision process, rather than a specific technique, which attempts to determine the impacts of policies and/or activities on the environment so that there is an opportunity for interested parties to decide whether those impacts are acceptable.<sup>4,5,6,7,8,9</sup> The definition of the environment includes the receiving environmental media and their physical components, living species occupying these media, and the built, cultural, and social environment. EIA is not a formal decision-making process, rather it is a management tool. It has several objectives which relate to the identification of potential problems in the decision process, the provision for the balancing of costs and benefits, the reduction of unacceptable impacts, and the provision of interdisciplinary inputs to environmental decisions. Management decisions require the status quo to be a relevant consideration, and the "to action" alternative is an important consideration in the EIA process.

There is no generally accepted definition of the purpose and nature of EIA. It is a term which has developed over the years, in the light of environmental concerns, policy, assessment techniques, and practice. The lack of a common definition can be seen as a disadvantage, offering different approaches between different countries and agencies, and a lack of clarity as to the requirements for potential users. Certainly EIA must be a dynamic process, constantly under review to ensure that its purpose and application is directly relevant to the needs of the time.<sup>10,11,12,13</sup>

### **Legislative development**

In spite of the early recognition of its broad potential as an influencing tool of environmental decision-making, EIA legislation has primarily been implemented in relation to the siting of new projects. EIA has its legislative roots in the USA, stipulated in the National Environmental Policy Act 1969 (NEPA), which required an "environmental impact statement," the outcome of an "environmental impact assessment," to be prepared for projects which were likely to have an impact on the environment.

The policy roots of EIA in the EU can be found in the first three European Community environmental action programmes developed after the 1972 United Nations Stockholm Conference. Specifically the principle of this policy was prevention of the creation of pollution at source, leading to pressure to consider the environmental implications of projects before their development. In 1985, the Council of the European Community approved an EIA Directive.<sup>12,13</sup>

### **European Community directive (directive 85/337/EEC)**

The Council's directive on the assessment of the effects of certain public and private projects on the environment was notified to the Member States on 3 July 1985. Member States were required to enact regulations to implement the provisions of the directive within their own legislative and

institutional frameworks by July 1988. The directive applied to "development consent" which was defined as the decision by the competent authority which gives authorisation to a developer to proceed with a project. This could be either planning permission or an environmental licence or permit.

To assist in defining the projects to which the requirements apply, the directive contains two lists: Annex I includes those projects for which EIA is compulsory; Annex II includes those projects for which the carrying out of an EIA is required, where they are likely to give rise to significant environmental impact according to criteria or thresholds to be defined at the Member State level. The project categories listed in the two annexes include both private and public sector projects. It is the responsibility of the developer to provide information on the likely significant effects on the environment - as defined in Article 5 and Annex III. In this context, environment specifically includes: (a) human beings, fauna and flora; (b) soil, water, air, climate and the landscape; (c) the interaction between the factors mentioned in the first and second items; (d) material assets and the cultural heritage.

The attention is focused on pollution and the need to take account of concerns to protect human health, the quality of life as it is affected by the environment, the continuity of the diversity of species and the maintenance of the whole ecosystem. The Directive contains no requirement to assess "pure" employment, social, or economic impacts. The information required to be provided "in an appropriate form" is specified in Article 5 of the Directive as "at least":

- description of the project comprising information on the site, design and size
- description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects
- data required to identify and to assess the main effects which the project is likely to have on the environment
- non-technical summary of the information specified

### **Hungarian directives**

Decree No. 152/1995. (1995.XII.12.) of the Government of the Republic of Hungary on the "regulation of the environmental impact study, and the Law LIII of 1995 on the "General Regulations on the Protection of the Environment" set forth the regulations on the environmental impact study. According to the stipulations, the environmental impact study shall include the following steps:

- objective, location and technological process description of the planned activity
- material and energy discharges into the environment, and use of environmental elements with special emphasis on soil and water utilisation
- limits of the effected areas, and description of these areas without the activity to be implemented
- estimation and assessment of the changes in the environment due to the activity to be implemented
- estimation of effects to human health, and economic and social consequences due to the changes in the environment
- description of measures to prevent, mitigate and decrease potential contamination and damages
- monitoring of the environmental impacts during the activity to be implemented and after completion of the activity
- data sources, assessment methods, limits of these methods, assessment reliability, and deficiencies and uncertainties of the assessment method
- geographic representation of the area
- list of documents used for the preparation of the study, and availability of the documents
- summary

It should be noted that the regulations on the implementation of the environmental impact assessment, the environmental audit, and the standards on environmental management systems are in harmony with the internationally accepted requirements.

### **Conclusion**

One of the most important developments of the previous years is the introduction of guidelines, recommendations and standards in the field of environmental protection. Environmental management can help the interested parties to approach and handle the environmental issues in a systematic way and to integrate the environmental protection into the normal daily practice and business activity of the companies. The environmental impact assessment is an essential tool in addition to the environmental auditing, environmental management systems, etc. in the achievement of the environmental protection goals and objectives in harmony with the expectations of the society.

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