

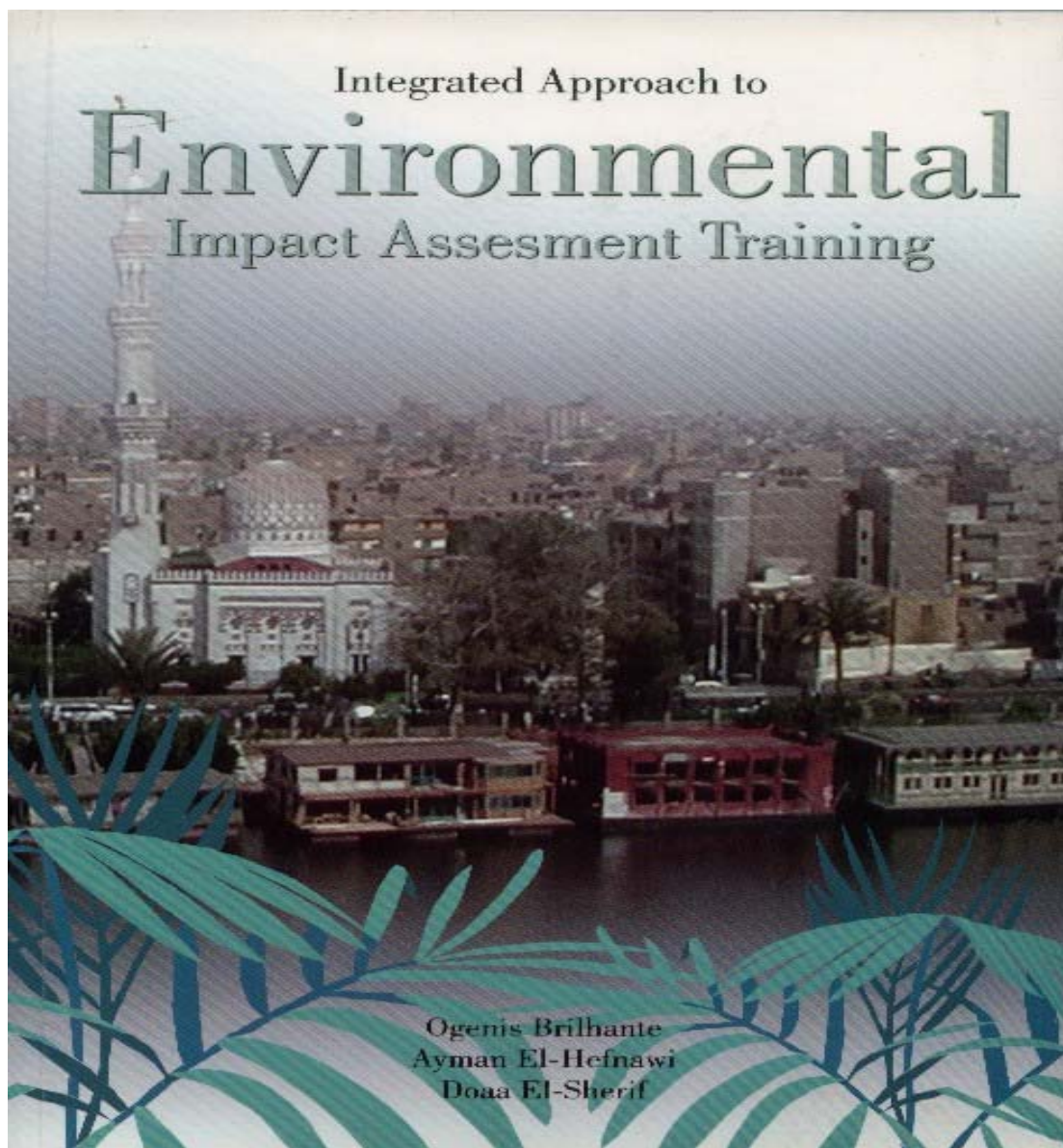
Integrated Approach to ENVIRONMENTAL Impact Assessment Training: **Egypt, Ghana, Brazil and the Netherlands**

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Published by Urban Training And Studies Institute (UTI) and Institute for Housing and Urban Development Studies (IHS), Rotterdam, The Netherlands (218 pg).

ISBN: 978-977-304-049-9

Printed by Elisa Modern Publishing House, Cairo, Egypt



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Introduction

Rapid population growth, increasing urbanisation and poverty are three major factors affecting world environment, development, social life and health. These factors are exerting significant pressures on natural resources and the capacity of natural ecosystems to support human activity. Nowadays, we have come to realise that natural environments have limited capacity; a fact that cannot be ignored, if the goal is to enhance and improve the health and well being of world citizens.

As the world becomes more and more urbanized, large scale, and primarily irreversible environmental impacts occur due to infrastructure projects, such as the construction of roads, transportation, water and wastewater treatment plants, industrial plants, ports, harbors, etc. Although having far reaching benefits, in terms of improving people's living standards, they also exert a number of adverse impacts as a result of potential negative impacts from the construction of infrastructures, together with the relevant mitigation measures that may need to be adopted.

In recent decades, governments have responded to the changing community concerns regarding environmental, social and health matters, and have developed, and/or extended, a broader range of tools for use in environmental management.

Environmental impact assessment (EIA), as one of the tools in this impressive array of environmental management tools, is proving to be particularly enduring. It is well over three decades since the first EIA was conducted in USA under that name. Today, EIA is being adopted in most countries and applied to an increasingly wide range of developments.

In all developing countries, the need to incorporate environmental considerations into the development process is now a generally accepted principle. The question is no longer whether the principle is valid and/or applicable, but rather, how it can be operationally incorporated in the planning and management process. EIA can be viewed as one of the several approaches available to achieve this objective.

Man's increasing control over his environment often creates conflicts between human goals and natural processes. In order to achieve greater yields, or for other purposes, man deflects the natural flows of energy, bypasses natural processes, severs food chains, disturbs ecosystems, and uses large energy subsidies to maintain delicate artificial equilibrium. In some cases, of course, these activities may generate positive gains, in others however, negative impacts are more prevailing. In all cases, some sort of impact is generated.

Perceptions about environmental impacts can be rather different. In countries where poverty is widespread, and large numbers of people do not have adequate food, shelter, health care, education, and/or old age security, lack of development may constitute a greater aggregate degradation to life quality than environmental impacts of development.

While it is clear that decisions will, and should, be made based upon different value judgments concerning the net cost-benefit assessment of environmental, socio-economic, and

health impacts, it is now widely accepted that development can be planned to make best use of environmental resources and avoid degradation.

Environmental Impact assessment (EIA) in developing countries, on the whole, tends to be very different from that in developed countries. In developing countries, for instance, the first EIA projects to be carried out were usually demanded by development assistance agencies, on a project-by-project basis, and not as a response to a widespread indigenous demand for better environmental conditions, as was the case in the world's developed countries.

This lack of demand is a consequence of the lack of political priority accorded to the environment in general, and to EIA in particular, and also from the old view that the deterioration of environmental quality is a necessary and justifiable cost of economic growth.

In many developing countries, most EIAs are still seen as a necessity to comply with the legislation, and a large number of them are conducted after a project has already been implemented.

One of the reasons for this situation is that the legal basis of EIA systems in many developing countries is either weak, not mandatory, or, in few countries, still non-existent. In addition, EIA responsible organizations are frequently either new, lacking in status, political clout, trained staff and/or working in a culture where an absence of information sharing considerably reduces their influence.

As a means of addressing these problems, there is a clear need to focus on both capacity building and training in the developing countries themselves, where it is nowadays recognized that in order to improve EIA systems, not only the creation of an institutional framework is needed, but also the development of local EIA expertise centers.

The Institute for Housing and Urban Studies (IHS), a Dutch organization situated in Rotterdam, together with The Urban Training institute (UTI), situated in Cairo, Egypt, have started, five years ago, to work together on the development of an Egyptian local center for environmental and housing expertise. Two years ago, IHS and the Training in Housing and Urban Development project (TRHUD) started to develop EIA training courses to Egyptian national and Governorate environmental agencies. IHS has also conducted EIA courses in various other developing countries such as Ghana, Peru, China, Bolivia, etc. In Egypt, a one-week first course was organized in 1999, where a broad introduction to the EIA field was presented. During the course, very positive discussions with the participants were held about the problems that faced EIA application in Egypt, including the quality of the Environmental Impact Assessment Report (EIS).

In 2001, the IHS, together with Egyptian EIA trainers from UTI, organized a special course tailor-made for the design of Environmental Impact Assessment Reports (EIS), including not only environmental aspects, but their integration with social, health and economic aspects as well. Parallel to the design of the course, and in order to validate it, the authors started writing this book, to be presently followed by a translation into Arabic.

This book is the product of that course. It incorporates the experiences of both IHS and Egyptian trainers. It presents an up-to-date review of the existing main EIA concepts and principles applied to projects, with a focus on urban infrastructure development projects, especially those of the water and wastewater sector. The book incorporates three new topics; the social, health and economic components of an EIA, which are not commonly concurrently included. It also introduces the very new concept of environmental health assessment, and attempts to make an overview of the EIA situation in four selected countries: Egypt, Ghana, Brazil and the Netherlands. These countries were selected based on the authors' EIA acquired training experiences there. Several boxes dealing with EIA at the international level, with a focus on those four countries, together with full EIA case studies, are presented in the book. A full chapter has also been devoted to monitoring, as an attempt to cover the gap currently existing in many EIA projects and books.

To date, little EIA literature has been written in Arabic, either in Egypt or the other Arab countries and very little was incorporating social, economic and health components of EIA. We hope to fill this gap with the Arabic version of this book

The structure of the book follows the organization of the course implemented by IHS and UTI through the TRHUD Project in June 2001 and January 2002:

Chapter 1 presents a general introduction to environmental impact assessment (EIA) concepts, including its definitions, purposes, applications, programs and institutional arrangements, as well as a detailed description of environmental impacts classification.

Chapter 2 presents the EIA process. A detailed international review is displayed, including several examples. Special attention is being accorded to the Scoping Process, particularly ToR preparation, which is almost non-existent in some developing countries. The current EIA system situation existing in Egypt, Ghana, Brazil and the Netherlands is portrayed, together with the relevant discussion and comparison.

Chapter 3 deals with the public participation component in EIA. Key actors, parties involved, stages of public involvement and the consultation process, are also featured.

In chapter 4, the EIA methods are presented and discussed. Special attention is awarded to the definitions of magnitude and significance, generally very neglected in environmental impact statement (EISs) prepared in developing countries. How to select impacts indicators, prediction and comparison techniques and mitigation measures are also presented.

Chapter 5 introduces a new subject in EIA reports. It deals with the health component in an EIA. This chapter introduces several new concepts, such as environmental health and the health impact assessment (HIA) method developed by the Asian Development Bank. A comparison of how HIA is undertaken as part of the EIAs in the four selected countries is presented, together with several examples.

Chapter 6 introduces the Social Impact Assessment (SIA) concept, also fairly new in developing countries, as another EIA component. A description of the social impacts framework, the SIA procedures and examples are offered. A comparison among the four selected countries with regards to the SIA component is also presented.

Chapter 7 presents the economic component of EIA. Although not a new topic, however, it represents a very weak part of EIA projects in developing countries. The chapter presents the role of economic analysis in EIA, how to measure externalities and quantify impacts. It also presents a full description of the most used valuation techniques, together with several examples.

In Chapter 8, the monitoring and auditing aspects are presented. Monitoring is not even well developed in developed countries. In developing countries, with few exemptions, the topic is only very superficially developed. Also, there is a lack of some more detailed information about this topic in the existing bulk of EIA knowledge. This chapter attempts to fill this gap. Besides, it presents the monitoring systems, their elements and different types. It also discusses monitoring in the different project phases, and presents the environmental performance monitoring and supervision system adopted by the World Bank. The post-audit aspects are introduced, together with related examples.

Chapter 9 deals with the preparation of the EIA report (EIS). It discusses the contents, presents the EIS format in USA and France and shows several examples of mitigation measures commonly used in development projects. The EIA costs and the time spent in the EIA preparation are also discussed. This topic is also not very often found in existing EIA books.

Chapter 10 shows the EIS review process. It presents the EIS review strategy, levels and criteria, supported by supplementary examples.

Chapter 11 presents several different EIS project case studies developed mainly in the four countries studied in this book.