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TOURISM - ENVIRONMENT - DEVELOPMENT

The Role of an

Environmental Impact Assessment and Beyond

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## INTRODUCTION

Environmental degradation is often viewed as an unavoidable component of economic development, but partly in response to the manifestation and magnitude of a number of specific environmental concerns it is increasingly realized that proper management of scarce natural resources is a necessary condition to achieve the major objectives of long-term development.

The principle of Environmental Impact Assessments (EIA) was established to incorporate environmental quality concerns in the process of development. The components of an EIA, i.e. identification of the impacts, measurement of relevant variables and interpretation of the data appear to limit the functional use of an EIA to the project level. ~~Below~~, however, it will be argued that the functions of an EIA are more encompassing. On the other hand it will also be argued that an EIA is a necessary but not sufficient condition to ensure the incorporation of the environmental dimension in the planning and development process.

This paper focuses on the nexus Tourism - Environment - Development but it must be noted that a similar approach applies to other sectors or to the process of development as a whole.





## Background

Tourism is a fast growing and significant economic activity in virtually all Caribbean countries. Tourist arrivals in the island territories of the Caribbean comprised some six million in 1982 and gross tourism receipts were estimated at about US\$3.6 billion. Although in absolute numbers tourist arrivals and gross receipts are higher in the larger Caribbean countries, in relative terms tourism is more important in the smaller islands, whether measured in economic terms like the ratios of gross tourism receipts to Gross Domestic Product (GDP) or to visible exports or measured in physical terms like the number of hotel rooms per square kilometer, tourist nights per 1,000 resident nights or any other commonly used yardstick.

In general tourism in the smaller economies of the region is based on a favourable climate and the attraction of their coastal and marine resources along with other natural, cultural and human assets. These factors have resulted in a concentration of tourist facilities within a narrow zone from the highwater mark, and over the years the form of these tourist developments have gradually changed from exclusive resorts to encompass now also cheaper facilities like cottages, apartments and condominiums, residential retirement homes and yachting related construction works.

Given the high income elasticity of leisure and excluding unforeseen adverse global economic or national political events, it appears likely that tourism will continue to show high rates of growth. Consequently tourism is seen by a number of countries as a major if not most important stimulus to future economic growth. In addition, many of the smaller economies may have few alternatives which offer the same potential as tourism as regards its contribution to gross domestic product, balance of payments, government revenue and employment all of which remain of continuing concern to most economies of the region.

## Establishment of Criteria

The use of tourism as a significant element of a country's development strategy has sometimes been a controversial choice and its pros and cons have, at times, been subject to fierce debates. However given the already important role of tourism the question whether or not tourism

has a positive or negative impact on the development process may be of less relevance to decision makers in the public or private sector. A more pragmatic approach would be the establishment of criteria or ways and means which need to be incorporated in the development and management of the tourist sector such as to maximise a country's long-term benefits, or alternatively to reduce its costs. From this perspective an analysis of positive or negative impacts is relevant if and when its conclusions can serve as an input in the establishment of such criteria. The first role then of an EIA would be its functioning as an aid on the establishment of these criteria on ways and means. Many of such assessments, although not all, are carried out 'ex-post' at the project level while some of their recommendations are applied at macro levels. The recommended increase in setback levels for hotels in low coastal areas is an example of this function of an EIA.

#### Development Alternatives

By its very nature tourism can have profound economic, socio-cultural and environmental effects although there are no a priori reasons to indicate whether these effects will be positive or negative. A major criterion would then be related to the enhancement and sustained use of resources for long-term tourism development. Acceptance of such a criterion immediately leads to three further questions. The first one pertains to the choice between tourism and other, potentially conflicting, uses of environmental resources in order to maximise country benefits, the second one to the kind of tourism desired, while the last pertains to the establishment of tourist activities in such a way that environmental resources are enhanced and accessible to nationals and tourists alike.

With respect to these questions another possible function of the EIA can be identified. This is the use of an EIA as an instrument in choosing between various development alternatives either within the tourism sector itself or relating to available opportunities in other sectors. This type of assessment is carried out 'ex-ante' and can be applied at the macro and intermediate levels. Although actual use of an EIA at the macro or intermediate level is not common in the Eastern Caribbean it is at this level that an EIA has its greatest scope in attaining the basic objective of enhancement and sustained use of resources for long-term development.

### Prevention and Mitigation

To a large extent tourism developments have been undertaken by the private sector in response to market demand and largely in the absence of policy guidelines and without the essential inputs of planning and environmental assessments, with governments responding in an ad hoc manner to developments and consequences. As a result short-term considerations appear to have had predominance over long-term ones. This has sometimes resulted in negative economic, socio-cultural or physical environmental impacts since such effects can extend beyond the time horizon of projected financial statements or, more often, extend beyond the confines of a tourism development project and hence do not form part of a private sector evaluation. Figure 1 illustrates some of the induced physical impacts tourism developments may have on other uses of coastal areas. Such external effects, like pollution, beach erosion and social stress can take significant proportions and examples are all too easily visible all over the region. On the other hand avoidance of loss of tourism earnings or the potential of increased earnings are sometimes, and increasingly so, used in the justification of projects or developments which have benefits that extend beyond the tourism sector. Sewerage schemes, restoration of historic buildings and the establishment of national parks are cases in point.

Relating to this two more applications of an EIA can be identified i.e. the prevention and the mitigation of environmental damage. With respect to prevention the emphasis is on avoiding resource management conflicts. The assessments are carried out 'ex-ante' and mostly at the project level. Examples are the explicit or implicit evaluations which need to be submitted together with development applications in a number of Caribbean territories. With respect to mitigation the emphasis is on the identification of remedial measures. The assessments are carried out 'ex-post' and can be at the project or intermediate level. The Barbados Coastal Conservation Study would be an example of such an application.

### Planning and Management

The four applications of an EIA are summarized in figure 2, but it must be noted that the boundaries are not always that distinctive. For example an EIA prepared for mitigation purposes can also be used in the establishment of criteria.

Incorporation and use of an EIA calls for a greater commitment to planning and management of tourism development at the macro and micro levels than is hitherto evidenced in the region. Major aspects of tourism development and management comprise the setting of objectives as regards to the impact and type of tourism desired, the preparation of a strategy to achieve these objectives, planning of tourism activities preferably as a component part of a comprehensive plan or otherwise as an extensive sector plan.



Tourism and Recreation

Waters and Biotic Physical Clumps	Effects
	Sewage
	Storm Runoff
	Garbage
	Inorganic Solid Waste
	Dredge Spoils
	Floating Solid Waste
	Pesticides
	Noise
	Shoreline Profile
	Beach Conditions
	Sediment Transport
Salinity	X
Turbidity	X
Color	X
Temperature	(X)
pH	(X)
Dissolved Oxygen	X
BOD	X
Nutrients	(X)
Metals	X
Other Dissolved Substances	X
Microorganisms	X
Fauna & Flora	X
Primary Productivity	(X)
Erosion	X
Deposition and Accretion	X
Qualitative Value	X

Adapted from Lawrence D. Newman - Methodologies for Coastal Area Management: Matrix Approaches in "Proceedings of the Workshop on Coastal Area Development and Management in Asia and the Pacific Month, Philippines 3-12 December 1979". Mark J. Valencia (ed.) East-West Center, Hawaii

Figure 2: Applications of an  
Environmental Impact Assessments

<u>Application</u>	<u>Timing</u>	<u>Level</u>
I. Aid in the establishment of criteria and ways or means which need to be incorporated in the development and management of the tourist sector such as to maximise a country's long-term benefit	Ex-Post (mostly)	Project → Macro
II. Aid in choosing between various development alternatives	Ex-ante	Macro → Project
III. Prevention of Environmental Damage	Ex-ante	Mostly Project
IV. Mitigation of Environmental Damage	Ex-Post	Project to Macro

The Environmental Impact Assessment (EIA) and Beyond

However refined an analysis the EIA is only one component of the planning process. Economic, financial and social components are of major importance and the conclusions and recommendations of an EIA should be considered simultaneously with those from the other components. The conclusions and recommendations of an EIA are often expressed in qualitative terms or in quantitative terms which are not easily translated to monetary terms. As a result the value of an EIA remains marginal (in the opinion of the decision makers) and is seen mostly as a restrictive instrument rather than as one which can be development oriented. Costly remedial works at some future date may be the consequence. To overcome these problems two approaches have been followed:

- i. Development of valuation techniques so that costs and benefits can be estimated in such a way that the environmental dimension can be incorporated in an economic analysis. Conceptual and empirical problems remain since not all impacts can be valued in monetary terms. However useful concepts and techniques have been developed in recent years. Within the Eastern Caribbean context the general data situation remains poor so that actual application of cost-benefit analysis in the planning process is not often carried out; and
- ii. Development of techniques explicitly designed to evaluate criteria measured in various units or expressed in qualitative terms only. Such a methodology combines the results from the EIA, the economic, financial and social analysis and lists each relevant decision criterion. The decision criteria are then assigned weights according to the preferences of the decision makers, after which a final evaluation follows. Although the assignment of weights is by no means an easy process the techniques appear to offer considerable potential for practical applicability within the region, mainly because of its simplicity and its ability to evaluate qualitative data.

### Conclusions

The various applications of an EIA can make a significant contribution to the planning process. To be seen as a positive, rather than a restrictive component of this planning process it will be necessary to go beyond the EIA and to incorporate its results in the total evaluation process. Evaluation techniques are becoming available and efforts should be made to apply these in the region. Until this is achieved it is likely that the value of an EIA will remain marginal in the opinion of the decision makers.

