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THE IMPORTANCE OF ENVIRONMENTAL IMPACT ASSESSMENT FOR SUSTAINABLE TOURISM AND AN EXPERIMENTAL ANALYSIS

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INTRODUCTION

The term "Sustainable Development" has become significant with *Brundland Commission Report* published first in 1987 and begun to be discussed. In that report, sustainable development is defined as "the development that meets the needs of present generation without putting the needs of the following generations in danger". In the light of this definition we can develop our own for sustainable tourism: "Sustainable Tourism is to provide present and potential touristic sources to be used in such a way that the following generations' benefit is under guarantee.

Environmental Impact Assessment (EIA) is, before starting investments in an area (a region), to predict negative and positive impacts of these investments on natural and human environment, and is all the analysing and decision-making process to increase positive impacts and minimise the negative ones. The investments in tourism the basic input of which is natural and cultural sources should be planned to provide sustaining these resources. So EIA is of great importance for all the elements of tourism, i.e. investors, administrators, businesses and social individuals to benefit from tourism. Once the impact of businesses to serve on touristic objectives and direct or indirect effects of various activities on environment are not considered, the resources which following generations may also benefit will come to an end or be destroyed and left out of function.

The objective of this study is to show the importance of EIA on behalf of sustainable tourism and the contributions EIA makes with the help of field investigation. In the first of three main chapters of this study, the conceptual dimension of sustainable tourism and its relation with EIA process will be handled in general. In the second chapter, the EIA acts in Turkey will be investigated in general and the steps of EIA in detail. The third is an experimental study. An investigation made in *Antalya*, one of the most important touristic areas of Turkey aims at determining positive impacts of EIA on environmental problems of the region from 1993. Consequently it is investigated what precautions are developed in the region and to what extent they decreased pollution. So the benefits of EIA studies in *Antalya* will be possible to be evaluated on behalf of sustainable tourism. This study ends with the efficiency of EIA practices and with recommendations to solve the problems faced.

1.0. THE RELATION BETWEEN SUSTAINABLE TOURISM AND EIA

1.1. The Importance And Meaning Of Sustainable Tourism

It does not matter which sector is on the focus, economic development will bring us across the term "*sustainable development*". The reason is that the increase and variation in economic activities will not only create positive impacts but the negative impacts on social life and environment should also be considered.

This necessity can be more easily noticed if lots of definitions are considered. According to *Berkes and Kiglakçoğlu*, for instance, *sustainable development* is the economic development which does not consume natural resources, which does not prevent the possibility the following generations meet their needs, which keeps the balance between economy and ecosystem and has ecological continuity.(1)

As can be seen in the definition above, the term sustainability makes references to necessity of the most economical use or consumption of environmental resources in a conscious way uncaring the needs of next generations. Dependently, development should be understood not only with its quantitative but also qualitative extent. In other words, economic activities providing and sustaining a clean and healthy environment with high standards, and plans and policies to anticipate wealth of future generations express "*real development*".(2)

With its structure and characteristics, tourism is a sector of industry that owes most of its development to environmental quality and balance between its components. On the other hand tourism, however, is a sector the impacts of which is most easily noticed on environment on behalf of sustainability.

When the definition given above on sustainable development is re-examined, the extent with tourism will be more strikingly noticed. Thus:

- Most of natural resources not to be consumed consists of the most important inputs of tourism. In other words, consuming these natural resources will bring tourism to an end.
- Touristic resources should be used as carefully as all other economic resources and they should also be presented to the benefit of the future generations. Because the more the world is globalised, namely, countries and people come closer to one another, tourism activities will be better predicted to become important both in quality and quantity.
- Using touristic resources in a way not to destroy ecological balance is of vital importance because the afore-mentioned touristic development potential follows the line progressing.
- Ecological sustainability aims at not only putting the future of tourism under guarantee but also protecting socio-economic environment and discovering clues for how the future will be like.

Shortly, development of tourism makes necessary to consider positive and negative impacts of both economic and environmental dimensions. The studies especially on environmental impacts of tourism prove that environment is the key input of tourism, and protection and good management of the environment will be of vital importance for both the future of tourism industry and for all the society.(3)

On the other hand, the term "carrying capacity" is hidden in those definitions and explanations. This concept is based on the question of "how much use is too much". And shortcomings of this concept related to tourism have led to the formulation of alternative approaches to resource management (4). The carrying capacity concept and its limits are very important problems for the people who are interested in sustainable tourism.

It is known that the term "sustainable development" was first brought into agenda and focus in the Report of UN World Environment and Development Commission in 1987. In this report which is also called "Brundtland Report", the term "sustainable tourism" is not directly pronounced but, parallel to increasing consciousness for environment, the discussions about literature was reflected to tourism as well. The most important reason was that environment is the most significant input of tourism and, as mentioned above, the protection of environment has an unchangeable position for sustainability of tourism.

Sustainable Tourism may be defined as follows:

- According to Cronin, sustainable tourism is to increase product quality and capacity of tourism without negatively affecting natural atmosphere and human resources feeding the sector.(5)
- Vincent Mary defines the term "sustainability" as to get the continuity of regional/local characteristics of tourism resources protected and developed.(5)
- In a more detailed definition, sustainable tourism is the result of viewpoint that is suitable for environment and society, which diminishes negative impacts on nature and culture, and which protects economic development, individual wealth of local people, natural and cultural resources and satisfaction of visiting people equally. In the framework this definition, the aim of sustainable tourism is to evaluate and manage to monitor the impacts of tourism.(7)

We can better understand how important the close relation between environment and tourism, which is one of the greatest and most quickly developing industries on behalf of sustainable development. With this viewpoint, we should also emphasise that sustainable tourism, as a concept or philosophy, has gained an increasing importance in 1990s. As a result, questions about how to prevent all environmental problems caused by tourism and what precautions in the future should be taken not to meet similar problems have been among the most significant subjects in the agenda. The question how to leave all natural and human resources to the tourists of the future is now accepted the problem of today.

1.2. Environment And Environmental Impacts Of Tourism In The Frame Of Sustainable Tourism

One should first describe the contents of "environment" to help discuss and understand potential environmental impacts of touristic development plans, policies and projects. Table 1 shows the content of what the environment should consist of:

Table 1. The Content of "Environment" is Subject to EMS

<p>I) PHYSICAL and BIOLOGICAL ENVIRONMENT</p> <p>a) Natural Environment</p> <p>1- Natural Resources</p> <ul style="list-style-type: none"> * Flora and Fauna <ul style="list-style-type: none"> - Species and Their Populations - Forests - Meadows and Pastures - Well-watered Areas - Nature Protection and Natural Parks * Soil * Water Resources <ul style="list-style-type: none"> - Drinking Water Resources - Underground Water Resources - Rivers - Lakes, Ponds and Reservoirs - Sea <p>2- Air (Atmosphere and Climate)</p> <ul style="list-style-type: none"> * Climate and Air Conditions <p>3- Mineral Resources</p> <ul style="list-style-type: none"> * Mines <ul style="list-style-type: none"> - Industrial Raw Materials - Metals - Energy Raw Materials <p>b) Artificial Environment</p> <ul style="list-style-type: none"> 1- Superstructure (Buildings, Bridges, Dams etc.) 2- Infrastructure (Roads, Drainage System etc.) 3- Historical Buildings (Status, Archaeological Ruins etc.) <p>II) SOCIO-ECONOMICAL ENVIRONMENT</p> <p>a) Economic Environment</p> <ul style="list-style-type: none"> 1- Income Level 2- Income Per Person 3- Income Distribution 4- Sectoral Structure and Current Situation 5- Sectoral Distribution of Employment 6- General Employment Level <p>b) Social Environment</p> <ul style="list-style-type: none"> 1- Population 2- Demographic Structure of Population 3- Life Styles of People 4- Social Infrastructure <p>c) Cultural Environment</p> <ul style="list-style-type: none"> 1- Social Values 2- Traditions and Customs 3- Morales 4- Belief Systems 5- Artistic Values 6- History

1.3. The Relation Between Sustainable Tourism And EIA

1.3.1. Definition And Features Of EIA

It was mentioned in the first chapter that there could be some potential effects of touristic activities on elements comprising the environment. Depending on what was said before, we should give the answer to the question below to create suitable conditions for sustainable tourism: Trying to develop tourism as a stimuli in socio-economic development on one hand, how can we prevent its negative impacts on environment on the other? Is there such a mechanism? Here comes the term "Environmental Impact Assessment (EIA)". When touristic plans and projects are prepared, it becomes possible with the help of EIA studies not only to get the benefit from these plans and projects to the highest level but also to predict and prevent various kinds of damage to the environment or to keep them in acceptable limits.

EIA is an important procedure that has been world wide accepted and adopted by many countries and put into practice. Because of that, it will be useful to focus on what EIA is and what features it bears:

There are lots of definitions in the literature. Some are given below:

- In general definition, EIA is a process that anticipates defining the impacts of human activities on environment and decreasing negative impacts as much as possible.(8)
- EIA is the process of determining the results of certain activities carried out on bio-geographical environment and human health and peace and reporting these results to authorities/institutions responsible for approval of some suggestions to influence their decision.(9)

- EIA is a process to assess environmental impacts arising before, during and after investment, and to convert the quality of environment into concrete understandable and measurable indicators.(10)
- EIA is a research method to assess objectively, directly or indirectly long or short term, monetary or non-monetary, measurable or immeasurable impacts on environment by any economic establishment.(11)
- In another definition EIA is a process or technique by which information about environmental impacts of a project is collected by either the person applied or other ways, and that this information is taken into account by competent planning authority deciding on a project.

Basic components of EIA process, the techniques to be used, legal necessities and the objectives of it may vary from country to country and even in the same country sectorally and regionally. But in spite of these variations, there exist some features pointed out in all EIA definitions and accepted at global extent. These are listed as follows:

- Environment mentioned in EIA definitions is "a physical, biologic, social, economic and cultural surrounding where living beings spend all their lives in interaction with each other.(12)
- EIA is a completion of methods used to examine the effects of a planned activity on environment.
- EIA is a process of comparison and selection making it possible to choose the most suitable of socio-economic and environmental cost and benefits among programmes or projects related to mentioned activity.
- EIA does not bear the quality of only certification in favour of the people to verdict and those to carry out. It is a kind of study which goes on after the project has been completed and gains continuity by feed-back.
- Though EIA is a study focusing on analytic methods and depending on numerical data, it makes intuitive and subjective statements also possible in situations impossible to express numerically.
- EIA is a process that not only negative but also positive effects are determined; that it minimises negative effects but increases positive ones.(13)
- Of projects and programmes subject to assessment, EIA takes not only the environmental effects for a certain time but also foresight for the future into consideration.

In the framework of plans and projects related to touristic investments, the benefits of EIA on behalf of sustainable tourism may be summarised as follows:

- a) The effective use of touristic sources in the future by means of predicting, understanding and evaluating environmental impacts from touristic investments;
- b) Easy adaptation to standards created for environment and providing continuity for these standards; (14)
- c) Positive psychological impacts created by convenient projects with themselves or with environment and taking this as an example by entrepreneurs;
- d) Setting trust and co-operation between touristic businesses and public opinion and public establishments;
- e) Being a material the importance of which will be ignored in creating consciousness and sensitiveness at all levels of society;
- f) Having the functions of archives presented to the following generations as a documented study;
- g) Having more positive contributions of accommodation establishments managed by EIA to the country economy (increase in income, creating value added, fair distribution of income);
- h) Protecting socio-cultural values and presenting these values to the following generations;
- i) Positive impacts of moderating efforts of EIA with socio-economic dimensions on general wealth of region (for example, giving more importance to regional work- power sources, giving priority to be most effective use of environmental resources, energy saving, recycling etc.)

2.0. THE ANALYSIS OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURE IN TURKEY FOR ACCOMMODATION ESTABLISHMENTS

2.1. Examining The Laws Of EIA In Turkey

The legal base for assessment of investment projects in environmental point of view in Turkey is the Environment Act published with Article No. 2872 at Official Paper No.18132 on 11.08.1983. It is said in the Article 10 of this Act that,

"The institutions, establishments and businesses the planned activities of which may lead to environmental problems shall prepare an EIA report. Considering any effect on environment, this report should consist of how to prevent the harm of the waste and garbage causing environmental pollution and the precautions to be taken on this way."

"The bases related in what kind of projects the EIA report will be needed, what it should consist and which authority it will be approved of shall be arranged with regulations."

The Article 31 of Environment Act also says:

"The regulations to carry out this Act shall be prepared by General Directorate of Environment counselling the related ministry. Within at least five months after the Act has been adopted, the regulations are published in Official Paper and put into force."

So EIA Regulations arranging the administrative and technical bases to obey during EIA process are in the responsibility of General Directorate of Environment at Ministry of Environment. The first EIA Regulation in Turkey is put into force on 07.02.1993 published at Official Paper No.21489. This Regulation has been revised because of incompatibility of EIA procedures and lack of good description of people who will prepare, and it was published at Official Paper No.23028 on 23.06.1997 and is still in force.(15)

The objective of the new regulation is to adapt present and possible changes and developments at economic, social and cultural structures, to hold the harmful environmental effects at the lowest level and to get the regulation to be modern legal arrangements. But in spite of these objectives, there is no detailed information about the people to prepare in revised regulation. At last on 12.08.1999 Official Paper No.23784 It was decided that person to prepare such a report should have a proficiency certificate.(16)

2.2. Contents Of EIA Regulations

The first chapter of EIA Regulation includes the objectives, content and legal base of EIA, and the definitions and abbreviations about EIA. It consists of four articles.(17)

The second chapter of it consists of "General Assumptions". There are "Authoritative Problems" in Article 5; "Obligation to Prepare EIA and Basic Report of EIA" in Article 6; "Application for Place Investigation" in Article 7; "Investigation for Activity Place" in Article 8.

The third chapter of EIA regulations consists of 9 articles as follows:

- Article 9- Activities for EIA Report
- Article 10- Application for EIA Report
- Article 11- The Subjects That the EIA Report Should Have
- Article 12- Compatibility of EIA Report to Formats
- Article 13- Formation of Investigation Commission
- Article 14- Duty, Authority and Responsibility of Investigation Commission
- Article 15- Working Methods of Investigation Commission
- Article 16- Joining People To EIA Process
- Article 17- Positive or Negative Opinions on EIA

Other chapters and contents are as follows:

2nd Chapter

- Article 18- Activities Subject to Basic EIA Report
- Article 19- Application for Basic Investigation Report
- Article 20- The Subjects That Basic Investigation Report Should Have
- Article 21- Compatibility of Basic Investigation Report to Formats
- Article 22- Formation of Basic Investigation Commission
- Article 23- Duty, Authority and Responsibility of Basic Investigation Commission
- Article 24- Working Methods of Basic Investigation Commission
- Article 25- Joining People to Basic EIA Process
- Article 26- Opinions Whether Environmental Effects Are Important or Not

3rd Chapter

- Article 27- Following and Inspecting The Procedures
- Article 28- Omitting Procedures Against Regulations
- Article 29- Extension or Stopping Duration
- Article 30- Change of Activity Owner
- Article 31- Solutions to Controversies
- Article 32- Proficiency Certificate
- Article 33- Military Procedures
- Article 34- Notification
- Article 35- Laws Cancelled
- Article 36- Validity
- Article 37- Implementation

Annexes

- Annex I - The List of Procedures For EIA
- Annex II- The List of Procedures For Basic Investigation Report of EIA
- Annex III- General Format of EIA Report
- Annex IV- General Format of Basic Investigation Report of EIA

2.3. A Study On Hospitality Businesses To Get EIA Report In Turkey

Having been referenced by in Articles 9 and 10 of EIA Regulations, Annex I and II show the procedures subject to an EIA report. According to Annex I, Article 29 "The tourism establishments of 200 or more rooms are subject to EIA" and to Annex II Article 16, "these of 50-200 room are subject to Basic EIA Investigation".

With this extent, it is obligatory for accommodation establishments of 200 and more room to prepare an EIA report. The one with 50 to 200 room Basic Investigation Report of EIA. So the procedures to follow will be different in both groups.

And under the headline of "Grand Infrastructure Procedures" in Article 27 /c, d and e ports, warves and docks and the accommodation establishments with yacht marines should make an EIA investigation.

2.4. Steps Of EIA Investigation For An Accommodation Establishment In Turkey*

2.4.1. Preparation Studies

a) Choosing The Co-ordinator Of The Project

The basic duty of co-ordinator is to realise EIA with present financial sources in given period and to present the report to the last decision-making authority as practical as possible to evaluate.

b) Identifying Other Competent Authorities

It is important to know the other authorities to resent (approve), permit or give consult, except for the one which make EIA compulsory (Ministry of Environment). So it will be beneficial for accommodation establishment to make an investigation.

The public institutions to be taken into account for accommodation establishments are as follows:

- Ministry of Tourism
- Ministry of Development and Housing
- Ministry of Finance
- Ministry of Transportation
- Ministry of Culture
- Ministry of Forestry
- Counsellor of Maritime Businesses
- Directorate of Private Environment Protection
- Governors
- Municipalities
- Central and Provincial Organisations of Above Mentioned Ministries

c) Procedures To Be Followed For EIA and Division Of Duty and Responsibility

The procedures to handle in the frame of EIA and duty and responsibility to carry all these procedures should be assessed.

Taking the activities of accommodation establishments into account, a formation of a working group (of an environmental engineer, a chemical engineer, a legal adviser, a city planner, a teaching staff, etc.) may be recommended.

d) Clear Definition Of The Project and Setting Alternatives

It is of great importance to make a clear definition of the project and to draw an outline of legal procedures in order to know which institutions to contact.

For instance, the content of investing for mountain tourism has been defined as follows(18):

- In establishments that are considered to be active for four seasons, that are planned for rest, amusement, training and especially winter sports, that reflect country life, depict regional architecture, in harmony with topographic structure and where modern investment and management model is adopted, the activities to be considered are:
 - Winter activities like skiing, sledge, half-pipe, ice-skating, snowboard and trekking with ski
 - Summer activities like trekking, line fishing, patent and cycling
 - Summer camps with training and sports of the young people
 - Health Centres
 - Congress Centre
 - Vocational Tourism & The Third Age Tourism
 - Plateau Tourism (that's why performing traditional festivals are sponsored in such regions)

After this clear definition, alternatives related to the project are developed and caring the criteria determined before, these alternatives are evaluated.

For instance, when a pond providing drinking and consuming water is planned by an accommodation, four alternatives are developed. Some of the criteria taken to choose one of them are illustrated below:

- Natural Beauty (Choosing a place full of trees)
- Geological Structure (Soil to hold the water)
- Planning Land (Not building a pond in sportive or accommodation area)
- Cost: For Accommodation

As an example, a project with higher cost may be accepted because of less damage to the environment.

* During the analysis these steps in detail all the acts, regulations and standards that are mentioned in the section of References and Istanbul University Environmental Engineering Lesson Notes have been used.

a) Investigating Acts and Standards About The Project

All the acts, regulations, instructions, circulars and technical documents related directly or indirectly should be provided and read carefully.(19)

Acts Related

1. The Coastal Act No.3830/3621 (published in Official Paper on 17.04.1990 with 200495, and 11.07.1992 with No.21281 and put into effect)
2. The regulations about the practice of Coastal Act and Annexes' Revisions (on changes)
3. The Ports Act No. 618
4. The Act No.3348 about Organisation and Duties of Ministry of Transportation
5. The Environmental Act and Revisions No.2872
6. The Tourism Promotion Act No.2634
7. The Act of Water Products No.1380
8. The Act about Establishment of Private Environmental Protection No.383
9. EIA Regulations

The Regulations and Practice About Whether Out of EIA Are Objectionable or Not

1. Regulations about the protection of Air Quality (Official Paper No.19269/ 02.11.1986)
2. Regulations about controlling Water Pollution (Official Paper No. 19919/ 04.09.1988)
3. Regulations about controlling Noise (Official Paper No.19308/ 11.12.1986)
4. Regulations about Harmful and Chemical Elements and Products (Official Paper No.21634/ 11.07.1993)
5. Regulations about controlling Medical Wastes (Official Paper No.21586/ 20.05.1993)
6. Regulations about controlling Dangerous Wastes (Official Paper No.22387/ 27.08.1995)

Subjects For Election of The Project In Accordance With Legal Laws

- It should be carefully investigated whether the project place can be included among the following areas:
1. "National Parks", "Natural Statues", "Nature Protection Areas" described in 2. And 3. Items of The Act of National Parks (no.2873)
 2. The places of "Living Atmosphere of Wild Life Species" described in the decision made by Ministry of Forestry, Central Hunting Commission according to The Act of Land Hunting (no.3157)
 3. "Forest Areas" described in The Act of Forest (no.6831)
 4. "Water Products Areas" defined in The Act of Water Products (no.1380)
 5. "Sensitive Areas" like to obtain fresh water, mineral water, salty lakes, lagoons, rivers, swamps, sedges, peat bogs, shallower than 6 metres
 6. Agricultural Areas, Agricultural Development Areas, Special Product Plantation Areas
 7. "Cultural Values & Protection Areas" defined in The Act of Cultural and Natural Protection Areas (no.2863)
 8. Cultural, historical and natural areas accepted as "Cultural Inheritance" or "Natural Inheritance" described in The Contract of Cultural and Natural Inheritance Protection.

2.4.2. Elimination

In this process, the activities listed in Annex I and II of EIA Regulations should be examined and to what extents to evaluate the project should be determined.

2.4.3. Assessing Environmental Impacts

In this process the environmental effects of the alternatives developed in previous steps are determined one by one. In the course, a Limitation Impact List is prepared by EIA in a way to include three steps of each alternative, "project- building- business"

After preparing the Limitation Impact List, the effects of primary importance are assessed by means of Impact Assessment Criteria. Here are the assessment criteria to be included:

1. Useful and Useless
2. Long Term or Short Term
3. Correctable or Incorrectible
4. Direct or Indirect
5. Regional or Strategic

In determining these criteria, the following four criteria may be useful:

- a) Size or Quantity of Impact (Those with bigger dimensions, capacity, energy need or production are more effective)
- b) Limitation of Impact (Extension of pollution or damage)
- c) Quality of Impact (Shows the core, dimensions and results of change in environment. For example if pollution reaches limits, a little discharge may be of great importance)
- d) Sensitiveness of Impact (Every area may have a different sort of sensitiveness. The discharge to sea will be different from that of a pond)

2.4.4. Assessment of Present Situation of The Environment

This may mean creating an inventory of environment. You may need to prepare the present situation, that's environment quality, with the headlines of physical, biological, socio-economic environment or others. In this process, one may be informed by field investigation, or study or investigation or study or investigations made by public institutions or establishments, research companies, universities etc..

To illustrate, the study to determine the level of sea-water pollution before starting a project may be given as an example to assess the present situation of physical and biological environment. Or the income or employment rate of an area may be found out by the means of data from Statistical Office or various other statistics and the present situation of socio-economic environment can be assessed.

2.4.5. Quantitative Assessment of Environmental Impacts

It is now time to find out the future impacts of the project on environment. The impacts may be negative or positive. What is important is correct assessment.

The predictions for future impacts of alternatives may be based on experience or quantitative analysis may also be used. However, the predictions based on experience should be supported by observation and measurement.

2.4.6. Assessment of Precautions to Decrease Environmental Impacts

In this step, the necessary precautions should be taken to increase positive impacts, and to prevent or moderate negative ones. What should be taken into consideration is whether precautions themselves create environmental problems. This should be carefully investigated.

The following table shows the precautions to be taken for some negative impacts of alternatives on environment.

Table 2. Negative Impacts of Accommodation Establishments on Environment and Some Corrective Acts

Factor/Agent	Negative Impact on Environmental Quality	Probable Moderating or Corrective Acts
Number of AEs and increase in their capacity	<ul style="list-style-type: none"> Loss of natural life land Damage to plantation 	<ul style="list-style-type: none"> Improvement and correction Planning and regional arrangements Practice and use
Noise	<ul style="list-style-type: none"> Disturbance to natural life, local people and visitors 	<ul style="list-style-type: none"> Creating consciousness campaigns to prevent pollution Regulations
Pollution	<ul style="list-style-type: none"> Natural life dependant on garbage Aesthetic mess damage To health 	<ul style="list-style-type: none"> Directing campaigns to create consciousness Regulations Constructing garbage centres
Animation Activities	<ul style="list-style-type: none"> Sound Pollution 	<ul style="list-style-type: none"> Limitation to entry and use Environmental training
Hunting	<ul style="list-style-type: none"> Disturbing natural life in especially proliferate season Consumption of food resources of hunting animals 	<ul style="list-style-type: none"> Limitation to entry and use Environmental training
Collecting souvenirs	<ul style="list-style-type: none"> Collecting natural materials under threaten like sea-shells and corals and spoiling their natural process. 	<ul style="list-style-type: none"> Environmental training Consciousness campaigns Legal limitations
Advertisements on notice-boards or panels	<ul style="list-style-type: none"> Spoiling natural views 	<ul style="list-style-type: none"> Regulations

2.4.7. Evaluating Project Alternatives And Preparing Suggestions

After determining negative impacts and minimising precautions of each alternative, it will be necessary to calculate its cost prediction. What is important at this stage is to deal economically with first construction and business costs. Separately feasibility reports should be prepared at this stage based on profit-cost analysis.

It may not be possible in all parameters to convert environmental factors into economic values. Therefore various EIA methods such as control lists or matrixes may be used.

2.4.8. Preparing An EIA Report

About investment activity verdicts as "Environmental Impacts Are Important" the owner of the investment applies Ministry with all kinds of documents he took from related public institutions or authorities and a copy of the verdict. He follows the procedures based on EIA Report Format he took from the Ministry.

The EIA Report should be able to clearly express the impacts of invested activity on environment, benefits or damages to the environment and all the precautions to be taken, should be easily understood so that responsible authorities could evaluate without difficulty and should be able to express results and judgement directly.

The Content of General Format of EIA Report can be described with main headlines as follows:

1. FRONT PAGE

- General Information To Introduce The Owner of The Project
- General Information About Institution Preparing The Report
- Name, Proficiency Certificate, No. Of The Project
- Identification Of Land Chosen For The Project

2. LIST OF CONTENTS

- CHAPTER I Definition and Objectives Of The Project
- CHAPTER II Condition Of Land For The Project
- CHAPTER III Economic and Social Dimensions Of The Project
- CHAPTER IV Identifying The Area To Be Affected By The Project and Describing Present Environmental Features In This Area
- CHAPTER V Impacts Of The Project On The Area Identified In Chapter IV and Precautions To Be Taken
- CHAPTER VI Possible and Ongoing Impacts After The Establishment's Activity Is Stopped And Precautions To Be Taken
- CHAPTER VII Project Alternatives
- CHAPTER VIII Monitoring Program
- CHAPTER IX Conclusion

3. ANNEXES

4. NOTES AND REFERENCES

2.4.9. Organising The Public Participation Meeting

It is very important to learn opinions of public for the investment that is subject to EIA process. The "public" concept consists of a large groups who are affected from the investment directly or indirectly or some people who have to learn the developments in region because of their jobs. For example Wilson says that there are a number of publics that will be involved in environmental risk management, ranging from employees, owners, citizens, the media, the courts and also the regulators. He points out that each of these have their own points of view that must be addressed to some extent in the development of tourism investments. (20)

From this point of view, in this stage a "Public Participation Meeting" is organised in the region. The date of this meeting is determined by the owner of the activity together with the authorities in Ministry to inform local people about the investment and to get their ideas and suggestions. Place, date and time of the meeting shall be announced for at least 15 labour days before by means of various communication materials. In this meeting organised under the chairmanship of the highest administrative authority or representatives in that region the opinions of people should be recorded by Environmental Directorate of City and reported to Ministry.

2.4.10. Decision Making Process

This is the process for responsible authority to choose one of the alternatives. After the decision is made to develop the activity in the frame of any alternative, a last project will be prepared for the activity. This last project consists of calculation and mapping about architecture, building and various other branches of engineering. These are given to related institution as a business project.

2.4.11. Monitoring and Inspecting Impacts After Project

After the project is put into practice, the precautions stated in EIA report should be monitored, inspected and evaluated. This is because:

- Environmental impacts predicted during EIA may be different from those in practice about intensity, time and statistical values;
- There may be additional impacts unnoticed or could not been seen during EIA process;
- The efficiency of precautions taken by accommodation establishments can be evaluated.

Monitoring and Inspecting Process will last for all steps of activity from the beginning to the end. These effects of related institutions and establishments help necessary changes and arrangements of EIA to be easier and businesses of similar activity to adjust.

3.0. Evaluation Of A Practical Study

3.1. Objective of Investigation

The main objective of this investigation is to find out the extent of solution the EIA studies will bring in Antalya which is one of the resorts where touristic activities exist most intensively. So this investigation will also determine whether EIA studies provide a convenient atmosphere on behalf of sustainable tourism.

3.2. Content of Investigation

To carry out this investigation, first, data and various reports related to environmental situation of Antalya Region has been examined and present situation is investigated at first. At the second stage of the investigation, authorities at Environmental Directorate of City primarily responsible for all environmental problems of Antalya have been interviewed extensively.

3.3. Method Used For Investigation

"Formatted Interview Forms" have been used during the face to face interview with the top management authorities at Environmental Directorate of Antalya.

3.4. Findings Obtained In The Investigation

The findings obtained in the investigation may be summarised as follows:

1. The general environmental problems which are caused touristic activities and accommodation establishments according to the different groups in Antalya can be summarised by the help of Table 3.
2. In the process to prepare and evaluate EIA reports for accommodation establishments Environmental Directorate of City is in co-operation with the following institutions:
 - State Water Affairs
 - Ministry of Forestry
 - Directorate General of Roads
 - Directorate General of Village Services
 - Ministry of Agriculture and Country (Village) Affairs
 - Ministry of Development and Housing
 - Ministry of Tourism
 - Ministry of Health
 - Ministry of Culture
 - Directorate of Museums
 - Local Municipality
3. The impacts of accommodation establishments projects preparing EIA can also be categorised by the help of Table 4.
4. Legal obligations to be carried out by accommodation establishments in Antalya in the content of regulations related to environmental problems may be listed as follows:
 - Fuel-oil is used to heat water for facilities. The emission values of legal limitations should not be exceeded to produce hot water. Therefore it is compulsory for these facilities to get their chimneys filtered.
 - To prevent water pollution, it is clearly stated in the regulations that household waste of facilities must not be decharged into the water randomly. Related laws and regulations state that purification (refining) facilities must be installed and the facilities should bear certain features.
 - To prevent and/or decrease noise pollution, facilities shall give a contract not to exceed limit values stated in the regulations at building or running processes and should obey it.
 - Accommodation establishments have to separate solid wastes (glass, plastic, food, paper etc..) and recycle them to economy.

Complaints from Local People	Complaints from Tourists	Complaints from Private or Public Institutions, Establishments or Clubs	Complaints from Accommodation Establishments
<ul style="list-style-type: none"> • Worries of local people not to benefit or profit from touristic resources as much as possible • Revenues to be obtained from touristic activities may be shared by people from other regions • Environmental problems created while building tourist establishments (noise, damage of roads, temporary, building dirt etc.) • Filling coasts with hotels and preventing public benefit • Aesthetic damage by reinforcement 	<ul style="list-style-type: none"> • Insufficient sensitiveness for environment the complaints about accommodation establishments have not been reported. • Water pollution at sea -however not by accommodation establishments but by local people or sea-vehicles. 	<ul style="list-style-type: none"> • Sound pollution (animation, disco, bar etc.) • Negative activities of establishments or facilities to damage natural life (activities threatening life and proliferation of Caralla-Carellas) • Threatening natural or wild life because of misusing beaches in front of accommodation establishments (riding, jeep tours etc.) 	<ul style="list-style-type: none"> • Constructing huts (for food, beverage, shops, souvenirs, pubs, restaurants) very close to accommodation establishments and creating visual pollution • Construction of accommodation establishments very close to each other and creating environmental problems (like sound and visual pollution)

Table 4. Impacts of Accommodation Establishments Projects Preparing EIA

At the Stage of Setting Land for Building and Construction	At the Stage of Running Business	After the Business is Stopped
<p>a) Impacts on Physical and Biological Environment</p> <ol style="list-style-type: none"> 1) Positive <ul style="list-style-type: none"> • No positive impacts 2) Negative <ul style="list-style-type: none"> • Cutting trees for building • Violate natural harmony • Uncleaned building materials • Sound pollution • Visual pollution <p>b) Impacts on Socio-Economic Environment</p> <ol style="list-style-type: none"> 1) Positive <ul style="list-style-type: none"> • Employment • Increase in local people's income • Added value • Contribution to fair income distribution 2) Negative <ul style="list-style-type: none"> • No negative impacts 	<p>a) Impacts on Physical and Biological Environment</p> <ol style="list-style-type: none"> 1) Positive <ul style="list-style-type: none"> • Creating environmental consciousness and so putting species and populations under protection 2) Negative <ul style="list-style-type: none"> • Exceeding use of environmental resources, migration to the region because of development touristic activities and as a result problematic urbanisation. • Disturbance to some animal and plant species by businesses (beaches, waste water etc.) • Sound pollution • Air pollution partly <p>b) Impacts on Socio-Economic Environment</p> <ol style="list-style-type: none"> 1) Positive <ul style="list-style-type: none"> • Constant employment for local people • Employment of unqualified manpower 2) Negative <ul style="list-style-type: none"> • Cultural deficit 	<p>a) Impacts on Physical and Biological Environment</p> <ol style="list-style-type: none"> 1) Positive <ul style="list-style-type: none"> • No positive impacts 2) Negative <ul style="list-style-type: none"> • No negative impacts <p>b) Impacts on Socio-Economic Environment</p> <ol style="list-style-type: none"> 1) No positive impacts 2) Negative <ul style="list-style-type: none"> • Unemployment • Loss of income

5. It is said by the Antalya General Directorate of Environment that EIA can prevent most of the environmental problems created by the accommodation establishments.
6. Among the project alternatives created in accordance with EIA, those bringing about the least problems mentioned above are approved and given an EIA positive report.
7. Some legal obligations of EIA process that show the development of environmental management is under control can be explained as follows:
 - By means of EIA, refinement facility for waste water has been obligatory and so the damage made by unrefined waste water to the environment has been minimised.
 - On the other hand accommodation establishments at zero point of across the sea are not allowed to empty waste water to the sea. Similarly continental waters such as rivers or stream are not allowed to be emptied.
 - Today 90% of accommodation establishments have waste water refinement facilities by means of EIA.
 - Present refinement facilities are periodically inspected.
 - There are positive efforts by accommodation establishments to recycle concrete waste into economy. For example lots of bars and restaurants in Antalya recycle bottles by collecting them. It is estimated that recycling of such kind goes up to 5 tonnes a day. Another example is using kitchen wastes as plant manure.
 - Some precautions are taken to protect caretta-carettas the generation of which is faced with extinction. The new arrangements which accommodation establishments are also about as follows:
 - To curtain internal or external lights during proliferate season between 1st May and 30th September to prevent lights from being seen on the beach and not to rise external lights more than one and a half metres.
 - To stop building during the season there are some regional restrictions which are still in practice. For example;
 - In Kizilot Region, light intensity is minimised in proliferate season, yellow light is encouraged, lights are off or curtailed after 12 p.m.
 - In Manavgat Region, present hotels, motels, etc are not allowed to destroy beach morphology.
 - The projectors used to provide beach security are installed in a way not to be noticed from the beach. Similarly the lights used in tennis courts, mini football or volleyball field etc are curtailed not to be seen from the sea.
 - In Tekirova Beach, the umbrellas are put 30 metres away from the sea, unmobile umbrellas are not used and the umbrellas are collected at night.
 - In the same beach, water sports like jet-ski, surfing, water-ski etc are banned within one mile in proliferate season.
8. Finally what kind of changes occur in the accommodation establishments in Antalya after EIA can be summarised by the help of following examples:
 - Refinement facilities were insufficient before EIA, whereas today there exists a sector using modern methods of physical and biological refinement in the region.
 - There exists a close relation and communication between local people and businesses by means of Public Participation Meetings organised in the content of EIA.
 - Furthermore the environmental consciousness brought about by EIA caused radical changes in approaches about environment. Accommodation establishments put their surroundings under protection without legal obligation.
 - The accommodation establishments subject to EIA are regularly inspected by Environmental Directorate, Health Directorate and Hygiene Institute at all levels like project, building and running.
 - After the inspection if there is any inconvenience with EIA, the accommodation establishments are punished at following steps:
 - First warning
 - Second, fine
 - Third stopping activity
 - It has been found out that there are very few establishments punished because of inconvenience to EIA and this shows that the punishment like warning and fine is effective.
 - The most important problem reported about preparing an EIA report by accommodation establishments at Environmental Directorate is that EIA studies have a bureaucratic and complicated structure.

CONCLUSION AND GENERAL EVALUATION

It can be seen easily that the followings are obligatory for accommodation establishments to contribute sustainable tourism in the framework of EIA:

- Planning the establishment in a way not to damage natural beauties and to be in harmony with the nature;
- Using properly the infrastructure of establishments (such as waste water refinement system);
- Collecting, storing, refining and recycling concrete wastes not to cause pollution;
- Taking precautions to minimise water pollution in the region or sea where the establishments are and keeping the beach clean;
- Giving importance (caring for) hygiene in food and beverage services at hotels and not using materials like bowls, bottles which the nature can not decay;
- Taking noise under control not to disturb the surroundings;
- Planning and carrying out activities not to threaten natural and wild life;
- Taking responsibility and mission to create environmental consciousness.

One of the most important regions attracting tourists with natural and archaeological beauties, Antalya is a destination taking attention for environmental problems because of vast number of facilities. It is difficult to say that the investments carried out before EIA are convenient for the relation between tourism and environment according to the results of this study. Touristic investments are affected by profitability in this city which is the main problem of today's economy.

In spite of all the precautions, it is impossible to say that all environmental problems are prevented in the region. Therefore there still are lots of precautions to be taken. These may be listed as follows:

- Heating with liquid gas should be encouraged in the region instead of coal consumption to minimise environmental damage. Solar energy may be used much more than today as a good alternative.
- Environmental damage caused by water pollution is still exist. Sewer system should be established to prevent waste water in this way. Almost 90% of touristic establishments have individual or shared refinement systems. However having these facilities can not prevent water pollution from being existed. This is because it is getting more and more commons among people to have a second house but the problem is that there is no sewage system in those areas where these houses are built. So it should be obligatory to construct a central sewer system and, besides, to use refinement system in these houses.
- It is necessary to stop building accommodation establishments in well-watered areas.
- Not only should underground water but also rivers and stream be considered to meet the need of drinking or household water, and the potential rivers or streams should be taken under protection.
- To minimise environmental damage caused by noise pollution;
 - It may be enough to obey the present regulations strictly about noise pollution not to exist. But especially it is essential to separate the departments, such as bars, discos and animation places etc of accommodation establishments very close or attached to each other so that the accommodations not damage one another.
 - Some precautions should be taken to prevent noise as the accommodation establishments are being built. For example, stopping all building activities during the high seasons or at very early or late hours of the day.
- The rubbish should not be sacked out of control, the wastes should be decomposed (plastic, glass, garbage etc) recycling units should be constructed to evaluate wastes.
- The most important thing is surely increasing the sensitivity of environment in the public. To realise this aim all the authorities should make a co-operation and use all the public relations tool for this objective.

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