



Department of the Environment

**Ministry of Natural Resources &
the Environment**



**PROCEDURES MANUAL FOR THE PREPARATION
OF AN
ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
IN BELIZE**

July 2011

The EIA Procedures Manual was first published on June 16, 1994. This first revision and updating was done by the Department of the Environment via a consultancy made possible through the assistance of the World Conservation Union (IUCN).

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ACRONYMS:

EIA-	Environmental Impact Assessment
LLES-	Limited Level Environmental Study
NEAC-	National Environmental Appraisal Committee
EPA-	Environmental Protection Act
DOE-	Department of the Environment
ECP-	Environmental Compliance Plan
NGO-	Non-Governmental Organization
TOR-	Terms of Reference

EIA Preparation Procedures Manual

Executive Summary

The EIA Preparers Manual, as is commonly called in Belize, was first prepared in 1994 and came into use in 1995 with the passage of the EIA Regulations. Its main advantage at the time was that it served as the only guide available that could be used by the few EIA Preparers in Belize in their efforts to make EIA reports as technical and comprehensive as required by the Environmental Protection Act and the EIA Regulations. Today, the less-than-ten EIA Preparers, most of them consultancy companies, have gained a lot of experience in preparing EIA reports. Their experiences have been primarily in only a few types of development that have been ongoing in Belize, the most of which have been coastal tourism development project and others related to residential subdivision developments.

As per the interviews conducted during this consultancy, most EIA Preparers considered that the manual was practically obsolete around 2000. Around that time the types of development were so different that each required more relevant information and analysis.

The main focus of this current revision and updating is to:

- a) the incorporation of the recent amendments of the EPA and EIA Regulations;
- b) the restructuring of the Manual to include current needs, especially with the revision of the two Schedules of projects that may or may not require EIAs, and the inclusion of new guidelines for permitting agencies regarding projects that must to be sent to the DOE for environmental screening;
- c) the clarification of the screening and review process by the DOE and the NEAC; and
- d) the participation of the public in the EIA process. Some new definitions, such as the Limited Level Environmental Study (LLES), and a new section on recommendations and resolutions by the NEAC have also been added. The list of permitting agencies and their respective legislation was also reviewed and updated.

This Manual is intrinsically based on the existing legislation that governs the EIA process in Belize. The DOE has been on a continuous process of modernizing existing legislation in order to keep abreast or at pace with the development of the country. Therefore, this Manual should also be continuously updated, at least every three years as recommended by those interviewed.

The clarification of the screening and review process by the DOE and the NEAC was a major exercise during the workshop and the final result is presented as a flowchart in page 12 of this document.

The NGOs consulted gave serious inputs to improve the public consultation and participation in the EIA process. The public inputs are necessary to clarify how the proposed development projects can affect the livelihoods of those directly impacted, and they in turn can contribute ideas on how developers can reduce the negative impacts of their projects on both the social and bio-physical environment.

INTRODUCTION

Environmental Impact Assessment

The Environmental Protection Act (EPA) of Belize was enacted in 1992 and was revised 2000 and more recently amended in 2009. Over the past twelve years, Environmental Impact Assessment (EIA) has gained widespread acceptance as a planning tool for promoting environmentally sound development practices. An EIA reflects a preventative approach to environmental management as it enables decision-makers to avoid problems before they occur during the planning stage. The undertaking of an EIA is stipulated under Sections 20 to 22 of the Environmental Protection Act.

EIAs provide information to developers, managers, planning authorities and the people likely to be affected by projects. It does so by identifying and addressing the various potential environmental impacts in the short, medium and long term, and identifies mechanisms, which may aid in their mitigation. An Environmental Impact Assessment should be conducted during the planning stage of the development/project so that relevant environmental concerns can be taken into account before both the design and implementation stages of the project

The EIA is one of the most commonly used environmental management tools and is applied to new projects as well as existing projects, which are undergoing expansion. Using the EIA procedure, developers and decision-makers can predict the effects of a range of development scenarios, develop plans for avoiding or minimizing negative environmental impacts, and, armed with this knowledge, select a wise course of action. The EIA should consider alternative project designs (including the "no-action alternative") as well as mitigation measures or environmental safeguards that should be incorporated into project design to ensure from the outset that the project is sound and sustainable.

The EIA process is a procedure used to examine the environmental consequences, both beneficial and adverse, of a proposed development project and to ensure that these consequences are taken into account in project design. The EIA evaluates the expected effects on human health, ecosystems processes, ecosystems health, and the natural and cultural environment, on property, etc. as well as on local communities.

OBJECTIVES OF ENVIRONMENTAL IMPACT ASSESSMENTS (EIAs) IN BELIZE

Since Belize is committed to sustainable development principles, EIAs are needed to assist the implementation of development projects and programs in a pragmatic and sustainable manner. In addition, the EIA is fundamentally a process used to achieve protection and management of the environment, consistent with national policies and laws, and in compliance with the country's commitment to international conventions addressing climate change, biodiversity conservation, ecosystems and environmental services, environmental flows, and environmental health. Therefore within these contexts, the objectives of the EIA process are:

- i. The EIA is a planning tool that is applicable to both public and private sector developments;
- ii. To protect biodiversity and ecosystem integrity;
- iii. It provides net community benefits from proposals that are implemented;
- iv. To exercise caution in dealing with environmental risk and irreversibility;
- v. To ensure that decisions are made on a timely basis and on sound environmental advice;
- vi. To encourage and provide opportunities for public participation in environmental aspects of proposals before decisions are taken;
- vii. To ensure that proponents of proposals take primary responsibility for the protection of the environment relating to their proposals;
- viii. It facilitates the planning and implementation of environmentally sound proposals by minimizing adverse impacts and maximizing benefits to the environment; and
- ix. To provide a basis for ongoing environmental management through the use of compliance monitoring.

Given the DOE experience and the importance of EIAs in Belize, the process has required the interaction of various Government agencies, as well as developers, in order to ensure an effective compliance with the EIA Procedure. Developers are required to be familiar with the Environmental Protection Act (its relevant Regulations and Amendments) as well as with this EIA Procedures Manual. Developers are also expected to contact the permitting agency to obtain an initial determination as to whether their project falls within a category requiring an EIA. Using this EIA Manual, a developer would know which types of projects require an EIA. In addition, the developer is required to complete and submit to the DOE an environmental checklist, along with copies of land tenure documents for the project site along with company documents (Articles and Memorandum of Association) and a project description in order to expedite the EIA process.

Permitting agencies can only evaluate the various issues which fall under their respective permitting requirements. When more than one license, permit or approval is required by a

proposed project, the permitting agency then refers the project to the Department of the Environment (DOE), consistent with the scope of the project and the provisions of Schedules I and II of the EIA Regulations. The developer would then be required to maintain close contact with the DOE and also supply all accurate information required by DOE. Some of the main functions of the DOE would then be to coordinate the activities required under the EIA Amendment Regulations, including the provision of information to developers and permitting agencies; to facilitate public meetings and consultations on EIAs; to ensure there is an avenue for public participation on EIAs, and act as Secretariat for the National Environmental Appraisal Committee (NEAC).

The DOE, in consultation with relevant permitting agencies, would screen projects referred to the DOE for determination as to whether an EIA or a Limited Level Environmental Study should be conducted. The NEAC then evaluates the EIA submitted, reviews the comments of government agencies, NGOs and the public on the EIA and recommends what action should be taken. Similarly, in the case of LLESs, key agencies evaluate the LLES, reviews comments of other stakeholders and recommend what action should be taken.

The EIA Procedures address the following matters:

- The statutory basis for EIA (this deals with the relevant statutory provisions of the Environmental Protection Act, the Mines and Minerals Act, the National Lands Act, etc.);
- The implications of not following the EIA Procedures;
- The relationship of the EIA Procedures to the existing permitting agencies and the nature of the permits being issued;
- Preparation of the Terms of Reference of the EIA;
- The contents of the EIA report;
- The determination of the need for public consultations/hearings;
- The composition of the NEAC;
- The submission of the EIA to the NEAC for evaluation;
- The decision to approve or reject the EIA;
- The appeal procedures when the project has not been approved; and
- Monitoring and compliance.

MANUAL FOR THE PREPARATION OF AN EIA

SECTION 1 GENERAL

This section addresses a number of general matters concerning EIA procedures including: definition, application of EIA Procedure, statutory provisions of the EIA, the role of the public, timetable for completion of the EIA process, preparation of the EIA (flow chart), appeals procedure, non-refundable fees and DOE/NEAC resolutions or recommendations to streamline the EIA process.

1.1 Definition

Environmental Impact Assessment is defined in the EIA Regulations as “the studies needed in identifying, predicting, evaluating, mitigating and managing the environmental, and key social and economic impacts of development projects, undertakings, programmes, policies or activities, the report of which is presented in a written document called the Environmental Impact Assessment Report”.

However, the process involves going through various steps and following various guidelines. These procedures outline the steps to be taken under the EIA Regulations and are integral to the project development process. Therefore, the EIA process should be developed in collaboration with the various permitting agencies.

At the screening stage it may be determined that the project does not require an EIA and the process normally terminates with the granting of Environmental Clearance, contingent on the signing of an Environmental Compliance Plan (ECP). Environmental Clearance can also be granted with conditions stipulated in an Environmental Clearance letter. If there is a need for permits/license from other agencies then those are stipulated in either the ECP or the Environmental Clearance letter. If during the screening phase however, it is deemed that an EIA or a LLES is required, then a Terms of Reference (TOR) is developed, that will outline the scope of the EIA. The provisions of Section 18(4) of the EIA Regulations allows for the DOE to specify the details of the procedure for public contact and involvement. Consistent with this, and in an effort to capitalize on lessons learnt in the EIA development process, the DOE may include in the TOR for the EIA that the following measures be taken to ensure public participation as part of the EIA development process:

- That the project proponent develop a Public Participation Plan for the process to be approved by the DOE;
- Include a Public Perception Survey that captures local and traditional knowledge either as part of the Public Participation Plan or as a separate activity in the process;

- In addition to Section 18(4) of the EIA Regulations, that the ‘Best Practices Manual’ be consulted and used to guide the preparation of the Public Participation Plan and the overall public participation process.

The EIA Report contains an assessment of the impacts of the proposed development on the social and physical environment and includes proposals or mitigation measures to avoid or lessen adverse impacts, and may specifically include specifications on how impacts and changes will be measured. Concerns normally addressed include:

- Conservation, re-arrangement and utilization of natural resources i.e. land, air, water and plant and animal life;
- Prevention and control of pollution of natural resources;
- Prevention of noise and control of noise levels resulting from the operation or activity;
- Economic factors that directly or indirectly affect the ability of the applicant to carry out the above measures;
- Protection of natural resources for their aesthetic value; and
- Effects on social and economic conditions in the community.

1.2 Application of Environmental Impact Assessment Procedures

The EPA states that an EIA will be required for projects which may have significant environmental impacts and those are applicable to both private sector and public sector projects. Where an EIA is required, the developer can prepare and submit a draft Terms of Reference (TOR) for the project to the DOE for vetting and approval. The TOR outline the scope of the EIA and as previously mentioned the TOR tries to identify the major areas of concern which may be impacted by the proposed project for example impacts to water quality, flora and fauna, etc. The draft TOR is then reviewed by the Department of the Environment and if needed by other relevant permitting agencies who are members of the NEAC. Once the DOE approves the TOR, the developer can proceed to prepare the EIA report.

1.3 Statutory Provisions for Environmental Impact Assessment

EIAs are currently required under the Environmental Protection Act, the National Lands Act, and the Mines and Mineral Act. The Environmental Protection Act requires that all projects that may significantly affect the environment, be submitted to the DOE for screening. Where the DOE determines that an EIA is required, the Act requires that such EIA shall identify and evaluate the effects on human beings, flora and fauna, soil, water, air and climatic factors, material assets including cultural heritage and landscape, natural resources, ecological balance and any other factors which need to be taken into account.

Under the Environmental Protection Act the EIA is required to include measures which the developer intends to take to mitigate any adverse environmental effects and a statement of reasonable alternative sites for the project. The Act specifically requires that every project, programme or activity shall be assessed with a view to the need to protect and improve human health and living conditions and the need to preserve the reproductive capacity of ecosystems as well as the diversity of species. The Act also requires that a proposed developer shall consult with the public and interested bodies.

The Environmental Protection Act prescribes a penalty of, not exceeding, \$25,000 for failing to carry out an EIA. Furthermore, where a person has commenced a project without an EIA, the DOE could under the provisions of Section 39 (1) of the Environmental Protection Act apply to the Supreme Court for an injunction. In addition, where loss or damage has been suffered a civil cause of action could arise under Section 40 of the Environmental Protection Act.

Under Section 9(4) of the National Lands Act every person who applies to lease 500 acres or more of national land shall be required to carry out an EIA before the determination of his lease application. In addition, under section 9(5) where the lease of national land is for less than 500 acres, the Minister, in his discretion, may require that an EIA be provided by the person applying to lease national lands. Every EIA provided under Section 9 becomes the property of the Government of Belize. In considering an application for a mining license under the Mines and Mineral Act, the Minister may require Environmental Impact Assessment from the applicant.

The EIA Regulations of March 2007 (S1 24/2007) amended the principal EIA Regulations of 1995, which serves as a guide in this manual. These Regulations contain a provision whereby an appeal could be made to the Minister, whenever a project is rejected.

1.4 Role of the Public in the EIA Process

“Public Participation” during EIA preparation

“Public Participation” during the EIA Report preparation can help clarify misconceptions and enhance social acceptability. Public Participation during the development of the EIA report can provide insight from various stakeholders in the area of influence, by doing so; it can start to bring social acceptability to the project. Public Consultation serves as a two-way flow of information from the project proponents to the general public and vice versa, with the objective of deliberating together. Local communities close to the project site are given opportunities to express their opinions, advice or point of view. Simultaneously, this will ensure that the project proponents and the EIA team provide details and explanations of the proposed undertaking for which an EIA has been prepared. This is a requirement of Section 18, of the EIA Regulations as Amended by S.I 24 of 2007 of 1995. At the consultations, which are opened to the general public and direct stakeholders, all those present can make

comments and opinions about the proposed project and the EIA report. It should be noted that the DOE goes only as facilitators and may answer questions posed to them regarding the process. The comments that add value to the content of the EIA report are then considered by the NEAC during the decision-making process.

Consultation/review on EIA Report

The public shall be involved in the review of the EIA Report. The availability of the EIA Report shall be published the same week that the report is submitted to the DOE by the developer. Copies of the EIA Report are placed at easily accessible public locations (libraries, Village Council Chairman homes, etc.) by the project proponents for public review. Also the DOE publishes the EIA Report on its website, www.doe.gov.bz, the public is given a time-frame to review the document and submit their comments to the Department.

Those submitting written inputs on the draft EIA Report to the DOE shall do so up until the last date before which the NEAC sits to review the EIA. They shall have the right to ask the DOE on the inclusion of their inputs by the EIA Preparer. Finally the NEAC and DOE should not take a decision on the EIA Report prior to the close of the public comment period. Otherwise, the DOE and/or NEAC will not have the benefit of the public input in reaching a decision.

Participation in the EIA review

The public are involved in a variety of ways including:

- (a) The representation of two NGO members on the NEAC;
- (b) During social surveys that is conducted as part of the report;
- (c) The public participate in the evaluation of proposals through offering advice, expressing opinions, providing local knowledge, proposing alternatives and commenting on how a proposal might be changed to better protect the environment;
- (d) Becoming involved in the early stages of the process when it is the most effective and efficient time to raise concerns, especially in public meetings;
- (e) Taking a responsible approach to opportunities for public participation in the EIA process; this includes the seeking out of objective information for issues of concern;
- (f) Becoming informed and involved in the administration and outcome of the Environmental Impact Assessment process including monitoring and compliance activities.

Public Hearing

The purpose of the public hearing is to facilitate the views of the public and to influence the modification of the project accordingly and ensure that public concerns are addressed in the EIA report. The public is given notice about the public hearing in the form of an advertisement in two widely circulated newspapers for two consecutive weeks. This allows the general public sufficient time to review and make comments on the document. This process is convened by the DOE, on the advice of the NEAC. Participation in this process is

governed by rules of procedures established by the DOE prior to holding the hearing. A public hearing is presided over by an impartial moderator appointed by the DOE. All inputs at the hearing are documented and submitted to the DOE for NEAC's review and consideration. The DOE reviews comments until the day before the NEAC meeting and also after the NEAC meeting.

1.5 Notices to the Public

The developer shall publish a notice in a local newspaper for two consecutive weeks advising the public where the copies (both digital and hard copies) of the EIA Reports will be available for reading and that a public consultation/hearing will be held at a stated venue with date and time. Once the EIA Report has been placed in the recognized public places, the public is given a time-frame to be defined by the DOE for which comments can be submitted to the Department.

1.6 Time-table for the EIA Process

Screening Stage

1. In the case of projects referred to DOE by a permitting agency, DOE would respond to the developer within **30 days** after receipt of the Project Checklist and the Project Proposal. The DOE will deliver to the developer the relevant checklist out of a total of six.

Evaluation of EIA

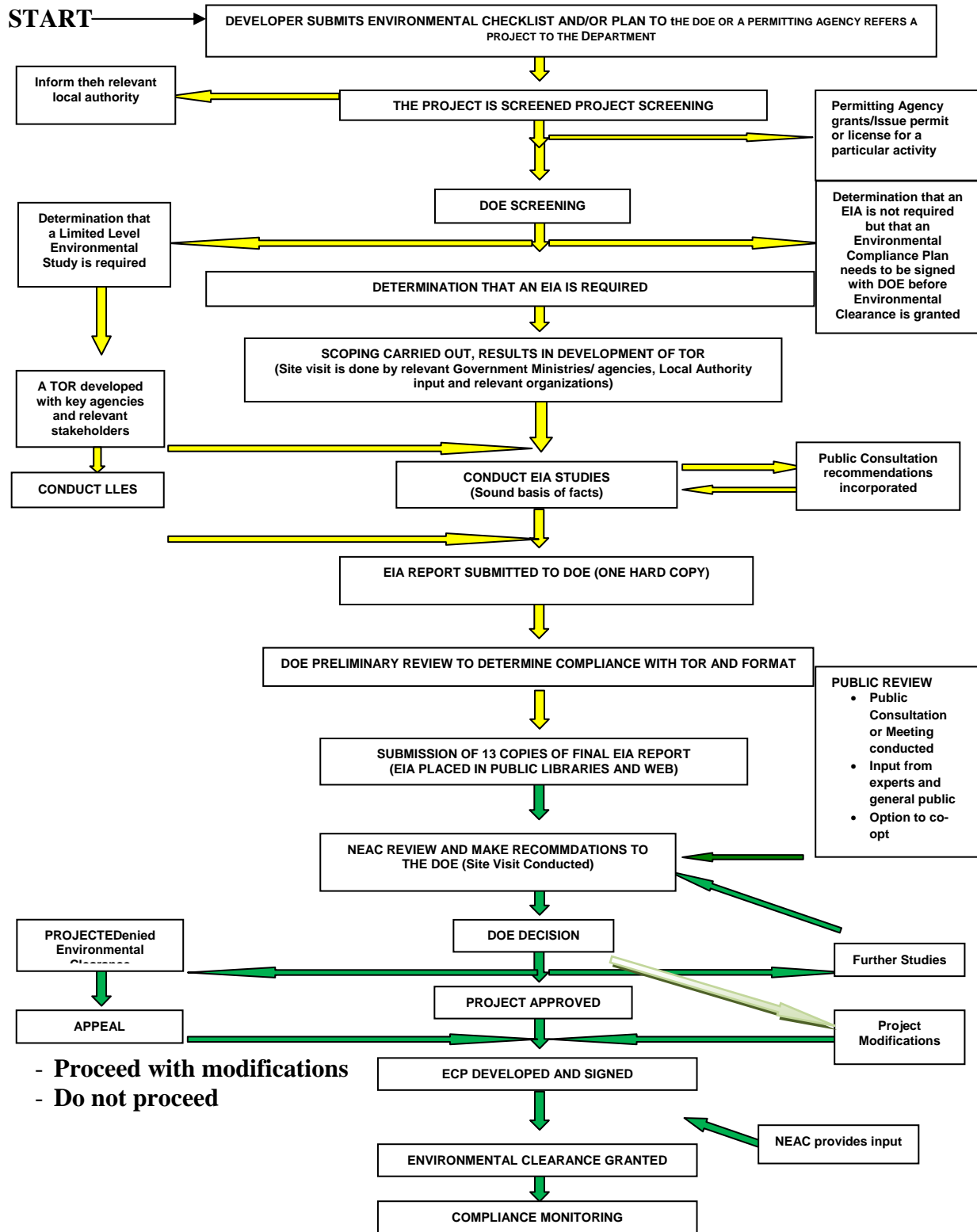
2. A decision on the approval or refusal of an EIA shall be made within **60 days** after the receipt of the EIA by DOE unless further information or data is requested by DOE in which case **60 days** from the receipt of such additional information or data.

1.7 Preparation of the EIA

The developer is required to submit one hard copy of the EIA Report to the DOE for preliminary review to determine compliance with format and the approved TOR. Then 13 hard copies and one digital copy of the final EIA Report is submitted to the DOE who is responsible for distributing copies to the members of the NEAC.

**TABLE 1
PROCESS**

STAGES OF THE ENVIRONMENTAL IMPACT ASSESSMENT



Yellow Arrows: Within the remit of Permitting Agencies and DOE

Green Arrows: Within the remit of NEAC

1.8 Appeal Procedures

At the end of the EIA process, if the DOE does not approve an EIA Report, then the developer is entitled to an appeal.

1. The appeal procedures are currently provided for in the EIA Regulations.
2. The EIA Regulation gives the developer the right to file an appeal against the decision of the DOE refusing to allow the project to proceed based on the EIA report.
3. The EIA Regulations stipulates the details of the appeal process as follows:
 - Where the Department has decided that an undertaking, project or activity shall not proceed, the developer may, within thirty days after the Department's decision, appeal to the Minister against the decision of the Department.
 - The Minister may appoint a Tribunal to hear and determine the appeal and to report their findings to the Minister.
 - The Minister may allow the appeal and permit the project to proceed or may dismiss the appeal.

1.9 Non-refundable Fees

Payment of non-refundable fees has been included in the revision of Environmental Regulations as follows:

1. In accordance with Regulation 11, the developer shall submit to the DOE a non-refundable application fee of up to \$1,000 for projects that does not require an EIA or LLES.
2. In accordance with Regulation 11, the developer shall submit to the DOE a non-refundable application fee of \$5,000 for projects requiring an EIA.
3. Where a project fall within Schedule II or where the DOE determines that a Limited Level Environmental Study is required, as per Regulation 3 (2), the developer shall submit to the DOE a non-refundable application fee of \$2,500.

1.10 NEAC Resolutions/Recommendations for the EIA Process

During the last decade of implementing the EIA process, the NEAC, through its experiences, has passed few resolutions which have become integral parts of the EIA Process in Belize. These include:

1. All developers need to present land tenure documents;
2. All developers need to present the Certificate (s) of Registration along with their Articles and Memorandum of Association of the local company(ies) to implement the development project;
3. All project that does an EIAs now needs to conduct a Public Consultation;

4. All developments must pay an Environmental Monitoring Fee; and
5. In accordance to Regulation 30 (SI 24 of 2007), the DOE, from time to time, may make reasonable arrangements to ensure that the developer complies with the terms and conditions of the Environmental Compliance Plan under the Regulations made under the Principal Act, and in particular, may require performance bonds or guarantees at an appropriate level in respect of this compliance.

SECTION 2 THE SCREENING PROCESS

2.1 Introduction

The use of the Environmental Impact Assessment (EIA) as a tool for evaluating impacts of a proposed development project has gained much more acceptance during the last twenty-five years.

One method of attaining this objective is to develop a set of guidelines which can be applied to projects to identify and isolate those which must be subjected to a complete EIA. This evaluation is called the Screening Process.

The number of projects potentially subject to environmental assessments is very large and the DOE has evaluated over 120 EIAs since its inception. The screening provides a mechanism where small, routine projects which produce no substantial environmental impacts can be screened out and allowed to proceed without conducting an EIA.

The screening process is of particular relevance to Schedule II and III projects. In the case of Schedule I projects an EIA is mandatory but screening may still be necessary to determine whether the project is to be properly classified as a Schedule I project. In the case of Schedule II projects, the screening process would result in a determination as to whether an EIA is required, a LLES, or none. If a LLES is required, the nature and extent of such studies are determined by the DOE, in consultation with key agencies. There would be two levels of screening: (i) screening by the permitting agencies and (ii) screening by the DOE.

2.2 Screening by the Permitting Agencies

All permitting agencies are required to screen all projects in terms of not only their requirements but also that of the Environmental Protection Act. Where a project falls within Schedule I there would be an automatic referral of the project to the DOE for evaluation. In the event that the proposal falls within Schedule II then the DOE would determine whether the project requires an EIA. Also "Schedule III" (as per new EIA Regulations, March 2007) now sets guidelines for permitting agencies in deferring proposals to the DOE.

2.3 Screening by the DOE

The DOE reviews all projects submitted by developers as well as those projects sent by the other relevant permitting agencies. As part of the screening process, the environmental checklists are reviewed by the DOE who then organizes and conducts a site inspection to the proposed project area along with relevant agencies. Subsequent to the review and site visit, the Department determines if the project requires:

1. An Environmental Impact Assessment (EIA).
OR
2. A Limited Level Environmental Study (LLES) to address specific areas of the proposed project.
OR
3. Neither an EIA or LLES is required but measures can be stipulated in an Environmental Compliance Plan (ECP) for the proposed project.

2.4 Guidelines for Screening

The evaluation of projects must take into consideration the proposed location, the size of the project and the various characteristics of the project itself. The guidelines will therefore be dealt with under these four major headings; location of project; size of project, nature of impact and other considerations.

a. Project Location

The selection of a screening category often depends substantially on the project setting, while the "significance" of potential impacts is partly a function of the natural and socio-cultural surroundings. There are a number of locations which should cause Schedule II projects to require an EIA. These include projects with the following criteria, but not limited to:

- In or near sensitive and valuable ecosystems such as wetlands, coral reefs and habitat of endangered species;
- In or near areas with archaeological and/or historical sites or existing cultural and social institutions;
- In densely populated areas, where resettlement may be required or pollution impacts and other disturbances may be significant;
- In regions subject to heavy development activities or where there are conflicts in natural resource allocation;
- Along watercourses, in aquifer recharge areas or in reservoir catchments used for potable water supply;
- On lands or waters containing valuable resources (e.g., fisheries, minerals, medicinal plants, prime agricultural soils);
- In areas already declared as national parks or other protected areas and areas proposed for national parks or areas of scientific and geological importance;
- In coastal areas up to 30 meters from the high tide line;
- Near watercourses, banks, flood plains and other areas subject to flooding;
- On hills of more than 25 degrees slopes;
- On or near beaches, caves, cayes and atolls.

b. Size

Sometimes projects by their mere size would have negative impacts on the environment, especially Schedule I projects.

c. Nature of Impacts

It is difficult to describe the nature of impacts without having some overlap with the concepts of sensitivity and project type. The following are examples of impacts that warrant or may warrant an EIA:

- Permanent conversion of potentially productive or valuable resources (e.g., fishery, natural forests, wetlands);
- Destruction of natural habitat and loss of biodiversity or environmental services provided by a natural system;
- Risk to human health or safety (e.g., from generation, storage or disposal of hazardous wastes, inappropriate occupational health and safety measures, violation of ambient water or air quality standards);
- Displacement of large numbers of people or businesses;
- Absence of effective mitigation or compensatory measures;
- All developments which discharge industrial effluent (including air emissions);
- All applications involving the building of individual sewage plants;
- All plants which have an initial projected output of more than fifty thousand (50,000) gallons per day of sewage;
- Applications with proposed sites located in the primary flood plain of a major river or stream;
- Proposed sites which are in proximity to unstable gully or stream banks;
- All applications for building in designated watershed areas;
- Proposals which necessitate the clearing of large areas of vegetation.

d. Other considerations

These other considerations includes: Special Development Areas, Coastal Zone Management Plans, Settlements Expansion Programs and Policy for Small Island Development. Finally, an environmental monitoring plan should also be developed.

e. Environmental Impact Assessment

Projects deemed by the permitting agency to require an EIA will be referred to the DOE for further determination and confirmation.

It is the responsibility of the agency which carried out the screening process to advise the proponent that the project has been sent to the DOE for the above-mentioned purpose.

2.5 Limited Level Environmental Study (LLES)

Limited Level Environmental Studies are requested for projects which could have negative environmental impacts, but are not significant to trigger an EIA. This study addresses specific negative environmental impacts that the project may have on the environment. Once the developer has prepared this LLES, it is submitted to the DOE which then organizes a team of key agencies to review the study and recommend to the DOE for consideration.

SECTION 3 CATEGORIES OF PROJECTS

There are three categories of development projects:

1. **Schedule I:** Full EIA is required.
2. **Schedule II:** A full EIA or LLES may be required depending on the location and size of the project and other considerations by the NEAC.
3. **Schedule III:** Guidelines for Permitting Agencies

Under Section 20 of the Environment Protection Act any project that may significantly affect the environment requires an EIA. Schedule I projects are those projects that are likely to have significant adverse impacts that may be sensitive, irreversible and diverse. Schedule I projects often have one or more of the following attributes that make the potential impacts significant: direct pollutant discharges that are large enough to cause degradation of air, water, or soil; large-scale physical disturbance of the site and/or surroundings; extraction, consumption or conversion of substantial amounts of forest and other natural resources; measurable modification of hydrological cycle; hazardous materials in more than incidental quantities; coastal erosion and the disturbance of the barrier reef; and involuntary displacement of people and other significant social disturbances.

Some Schedule II projects differ from Schedule I projects only in scale. Large irrigation and drainage projects are usually Schedule I while small-scale project of the same type may fall into Schedule II. In a Schedule II project, the impact may not be as serious as a Schedule I project depending on size, location and other considerations.

Schedule III projects: this section in the EIA Regulations serve as guidelines to be used by permitting agencies and/or licensing agencies to determine when a project, program, undertaking or activity is to be sent to the DOE for their review.

3.1 Projects under Schedule I

The following projects will be considered as **Schedule I** projects. A full Environmental Impact Assessment (EIA) must be completed for any project, program or activity with the following purposes:

1. Aquaculture Projects
 - a. Any research or commercial scale aquaculture project within wetland or floodplain areas.

- b. Construction or expansion of aquaculture research or commercial facility with production of 75 tons per annum or more of unprocessed aquaculture products.
- c. Any seabed-based marine culture or freshwater cage culture aquaculture facility to be established within 15 acres of production area for the purpose of producing any aquaculture produce.
- d. Any marine aquaculture facility to be established within 5 miles radius of the Belize Barrier Reek or any major coral reef system.
- e. Any aquaculture facility or operation involving the culture of any aquatic flora or fauna not native or commercially cultured in Belize.
- f. Any freshwater aquaculture facility either utilizing a total pond production area of 50 acres or more, or a total daily water abstraction rate greater than 5 million gallons per day.

2. Cement

- a. Production and bagging of cement.

3. Chemical Industry

- a. The treatment of intermediate products and production of chemicals (insecticides, fungicides, herbicides and other pesticides).
- b. The production of pesticides or pharmaceutical products, paints, varnishes, elastomers or peroxides products.
- c. The production of industrial carbon.
- d. The production of alkalies.
- e. The installation of electro-chemicals plants (metallic sodium, potassium and magnesium, chlorides, per-chlorates and peroxides).
- f. The installation of electro-thermal products (artificial abrasive, calcium carbides).
- g. The production of phosphorous and its compounds.
- h. The production of nitrogenous compounds (cyanide and other nitrogenous compounds).
- i. The production of halogens and halogenated compounds (chlorine, fluorine, bromine and iodine).
- j. The production of explosives (including industrial explosives, detonators & fuses).
- k. The production of any hazardous substances that are listed in Part 1 of the Environmental Protection Act.

4. Dams and Waterworks

- a. Major water works: alteration of river banks and shoreline, alteration of ground water, diversion of water courses, modification of stream flows.

- b. Construction of large dams, impoundments or other installation designed to hold water or store it on a long-term basis.
 - c. Large irrigation works.
 - d. Construction of large drainage canals.
5. Drugs and Pharmaceutical
- a. Manufacturing of drugs and pharmaceutical including vitamins and antibiotics.
6. Energy Generation and Distribution Projects
- a. Any large installation for the production of 15 megawatts of electricity or other forms of energy.
 - b. An industrial installation for the storage of natural gas or more than 10,000 barrels of fuel/petroleum production.
 - c. Any major project involving the transmission or distribution of energy by overhead or underwater projects outside of an existing corridor.
7. Housing
- a. Large scale housing developments or a sub-division on mainland involving the proposed construction of more than 300 houses.
 - b. Housing development of more than 50 houses on the cayes or islands.
8. Infrastructure Projects
- a. The construction of industrial estate development for heavy industries.
 - b. Construction of National highways.
 - c. Construction of new townships.
 - d. The construction of a large harbor, marina, shipping port, trading port, an inland waterway which permits the passage of vessels or a port for inland waterway traffic capable of handling such vessels.
 - e. A waste-disposal installation for the incineration or chemical treatment or disposal of waste, or installation designed solely for the temporary storage of waste.
 - f. Any airport having an airstrip of 2,000 meters or longer.
 - g. Any major installation or transmission lines by overhead, underground, or underwater cables or other methods of installation.
 - h. Construction of hotels, resort facilities and golf courses within or in close proximity of the boundaries of a protected area or a World Heritage Site.

9. Land Reclamation
 - a. Dredging for land reclamation and/or creation of projects utilizing a volume of material of more than 50,000 cubic yards along the coast, cayes and ecologically sensitive waterways.
 - b. Any land reclamation or creation of a project in excess of ten (10) acres along the coast or within a wetland.

10. Mining and Industrial Processing of Ores
 - a. Any large installation for the processing of mineral ores.
 - b. An installation for the processing of metallic ores (including smelting, electroplating, refining, drawing and rolling).
 - c. Any large scale mining of minerals.

11. Paper Industry
 - a. The manufacturing of paper for writing, printing and wrapping.
 - b. The manufacture of newsprint paper.
 - c. The manufacture of wood pulp (mechanical, chemical including dissolving pulp).

12. Petroleum
 - a. Oil development and production.
 - b. Oil refining.

13. Rubber Industry (natural and synthetic)
 - a. The manufacture and treatment of elastomer-based products.
 - b. Production of natural and synthetic rubber.
 - c. Production of tires and tubes.
 - d. Production of surgical and medical products including prophylactics and latex products.
 - e. The manufacture of footwear and other rubber goods.

14. Other products
 - a. An integrated chemical installation, that is to say, an industrial installation or group of installations where two or more linked chemical or physical processes are employed.
 - b. Lease of more than five hundred (500) acres of National Lands.
 - c. Any logging operation within a forest reserve.

- d. Logging or conversion of forest land, employing the clear fell method covering more than 300 acres.
- e. Logging operations of more than 100 acres adjacent to any protected area declared under the National Park System Act.
- f. Any large scale agro-processing plant.
- g. Clearing of more than 300 acres of land.
- h. Clearing of more than 10 acres of mangrove in ecologically sensitive areas.
- i. Ground water abstraction works of more than 5 million gallons per day.
- j. The establishment of Commercial Free Zones (CFZ).
- k. The establishment of Export Processing Zones (EPZ).
- l. Any proposed development project, undertaking or activity.

3.2 Projects under Schedule II

The following projects will be considered as **Schedule II** projects. They may require an Environmental Impact Assessment or Limited Level Environmental Study depending on the location and size of the project.

1. Aquaculture

- a. Construction or expansion of a marine aquaculture research or commercial facility with production capacities of less than 75 Ton Per Annum of unprocessed aquaculture produce.
- b. Any seabed-based marine aquaculture facility which will utilize less than 15 acres of production area for the purpose of producing any aquaculture produce.
- c. Any aquaculture facility or operation involving the culture of any aquatic flora or fauna already under commercial production in Belize.
- d. The establishment of any processing facility in Belize for the processing of any aquaculture commodity.
- e. The establishment of any hatchery facility in Belize for the purpose of producing freshwater and marine seed stocks either for aquaculture or restocking purposes.

2. Agriculture

- a. Commercial poultry-rearing
- b. Commercial pig-rearing of more than 10 sow breeding herd.
- c. Planting and cultivation of agriculture plots of more than 200 Acres (e.g. citrus, bananas, sugar cane, vegetable).
- d. Cultivation of cotton (*Gossypium* spp) in a plot larger than 50 acres
- e. Cultivation of high agrochemical input commodity (e.g. bananas and papayas for export) on plot larger than 50 acres or near to sensitive water resources.
- f. Post-harvest treatment utilizing radiation energy.

3. Chemical Industry
 - a. The storage of any petroleum, petrochemical or chemical products.
4. Dredging and Land Reclamation schemes
 - a. Dredging for land reclamation and/or creation for projects utilizing a volume of material of less than 50,000 cubic yards along the coast, cayes and ecologically sensitive areas.
5. Energy Industry
 - a. The surface storage of natural gas, coal or lignite on a large scale commercial basis.
 - b. The underground storage of combustible gases.
 - c. The storage of fossil fuels of 5,000 gallons or more.
 - d. The industrial briquetting of coal lignite.
 - e. Any installation for the production of electricity, steam and hot water.
6. Fertilizers
 - a. Production of Nitrogenous fertilizer
 - b. Production of Phosphatic fertilizer
7. Fisheries
 - a. Construction of fishing harbors or large fishing piers
 - b. Expansion and restoration works for fish processing plants, harbor or large piers involving 50 percent or more in fish landing capacity or annum.
8. Food Industry
 - a. The manufacture of vegetable or animal oils or fats.
 - b. The packing or canning of animal or vegetable.
 - c. The manufacture of dairy products.
 - d. Brewing or malting.
 - e. Confectionery or syrup manufacture
 - f. An installation for the slaughter of animals and/or subsequent processing activities related thereto.
 - g. An industrial starch manufacturing installation.
 - h. Any citrus processing installation

9. Forestry
 - a. Conversion of hill forest land (with slopes greater than 25 degrees) to other land use.
 - b. Logging or conversion of forest land use within the catchment area of reservoirs used for municipal water supply, irrigation or hydro-power generation or in areas adjacent to national parks or protected areas.
 - c. Logging or conversion of forest land adjacent to national parks, nature reserve, wildlife sanctuary, archaeological sites or any protected area declared under the National Park Systems Act.
 - d. Logging or conversion of forest land, employing the clear fell method, covering areas between 100 and 300 acres.
 - e. Clearing of fringing mangrove vegetation on islands or adjacent to marine or forest reserves for industrial, housing or agriculture use.

10. Glass or Ceramic Making
 - a. The manufacture of glass or ceramic.

11. Housing
 - a. Large scale housing developing or subdivisions involving the proposed construction of more than 100 houses but less than 300 houses.
 - b. Housing developments, subdivisions, agricultural developments or any other type of developmental project that could affect established biological corridors.

12. Infrastructure Projects
 - a. An urban development project of less than 300 acres
 - b. The construction of a road, or airstrip or an airport of less than 2000 meters in length.
 - c. Canalization or flood relief works.
 - d. A dam or other installation designed to hold water or store it on a long-term basis.
 - e. An oil or gas pipeline installation of less than 5 miles in length.
 - f. A long-distant aqueduct.
 - g. The lease or sale of less than 500 acres of National Land.
 - h. Any activity involving stream alterations or diversions.

13. Medical Facilities
 - a. The construction of hospitals.

14. Mining and Processing of Minerals
 - a. Any small scale mining and processing of minerals
 - b. Extracting minerals such as marble, sand, gravel, shale, salt, Phosphate and potash.
 - c. Mining of river sand and gravel volumes greater than 15,000 cubic yards.

15. Paper and Pulp (including Paper Products)
 - a. Paper board.
 - b. Paper for packaging (corrugated papers, craft paper, paper bags, containers and the like).
 - c. Sanitary paper.
 - d. Cigarette paper.
 - e. Other paper products.

16. Petroleum
 - a. Petroleum exploration activities such as seismic surveys.

17. Resort and Recreational Development
 - a. Construction of hotels, golf course or large scale coastal resort facilities.
 - b. Development of tourist or recreational facilities in or adjacent to national parks or protected areas.
 - c. Development of tourist or recreational facilities on cayes or islands.

18. Textile, Leather and wood Industries
 - a. A wool scouring, de-greasing and bleaching factory.
 - b. The manufacturing of fiber board, particle board for plywood.
 - c. A fiber-dying factory.
 - d. A leather tanning or leather dressing factory.

19. Water Abstraction (Ground and Surface Water)
 - a. Deep drilling, including in particular: drilling for water supplies.

20. Other Projects
 - a. A resort facility or hotel complex.
 - b. Operation of activities of a Cruise Ship and Live Aboard vessel.
 - c. A permanent race track or test track for cars or motor cycles.
 - d. A waste water treatment plant.

- e. The storage of scrap iron.
- f. The manufacture of artificial mineral fibers.
- g. Rural water supply and sanitation projects or programs.
- h. Agro industries.
- i. Rural electrification.
- j. Installation of printing establishments.
- k. Hospital and medical laboratories (other than those specified in Schedule I).
- l. Any project mentioned in Schedule I and II where there is an expansion of more than 50% over and above the existing project.
- m. The modification of a development which has been carried out, where that development is within a description mentioned above.

3.3 “Schedule III “(Guidelines)

The following are guidelines to be used by permitting and/or licensing agencies to determine when a project, programme, undertaking or activity is to be sent to Department of the Environment for review.

The following guidelines shall apply to all Schedule **III** projects, programs, undertakings or activities, and shall be strictly followed by all government agencies in considering whether the project, programme undertaking or activity shall be referred to the Department.

- 1. All applicants for development in coastal areas or offshore cayes or islands.
- 2. All applications for development near or in ecologically sensitive areas such as but not limited to swamps, marshes, mangrove forest, lagoons, barrier reef, flood plain etc.)
- 3. All applicants for development within or in close proximity to the following areas:
 - a. Any protected areas.
 - b. Critical habitats for protected, threatened or endangered species of floras and fauna.
 - c. Primary Biological Corridors.
- 4. All developments which discharge industrial effluent unto soil or water, including air emissions.
- 5. All applications involving the building of sewage treatment and disposal systems. This includes all plants which have an initial projected output of more than fifty thousand (50,000) gallons per day of sewage.
- 6. Applications with proposed sites located in the primary flood plain of a major river or stream.
- 7. Proposals at sites which are in close proximity to vulnerable areas (unstable soils, gully, stream banks or steep slopes more than 25 degrees).
- 8. All applications for development in major watershed areas.

9. Proposals which necessitate the clearing of large areas (more than 500 acres) of vegetation.
10. All applications for small scale extraction and processing of minerals.
11. All activities related to the petroleum sector.
12. Any desalination plant proposing to extract more than 5 million gallons per day.

3.4 Projects Not Requiring an EIA

Under Section 9 of the EIA Regulations as amended by SI 24 of 2007, the following projects are not required to carry out an EIA:

- a. Educational and health projects (except building construction);
- b. Computer processing projects; and
- c. Projects to be carried out during a declared national emergency for which temporary measures have been taken by Government.

SECTION 4 SCOPING OF THE EIA AND DRAFTING OF TERMS REFERENCE

4.1 Scoping

When an EIA is required, it is essential to plan the scope of the study at the beginning of the process. Many projects involve a large number of possible alternatives and impacts. Each alternative could have a variety of impacts, some more significant than others. In order to carry out the EIA in an efficient manner, the scope of the issues to be studied can be agreed on at the beginning of the process. This early phase of the EIA is widely known as "scoping".

Scoping shall be used to determine the magnitude and significant issues to be analyzed in depth in the EIA. The scoping for an EIA study should take place before the actual study begins. It typically takes place in a meeting or series of meetings involving the developer or his representative, DOE and the relevant government agencies. It refers to the process used to determine the breadth of issues to be addressed, to identify the significant issues related to a proposed project and to identify and eliminate from detailed study the issues that are not significant.

The process involves the selection of environmental parameters to be considered during the study. In this activity emphasis is placed upon: a) the location of the project site; b) the type of project or activity proposed for the site; and c) the quality of the natural environment prevailing in the study area.

During this phase the developer or his representative shall meet with the Department to discuss the Terms of Reference which will determine the scope of the EIA. The DOE makes itself available at all times to assist developers with the scoping of the study.

4.2 The Terms of Reference

The Terms of Reference (TOR) involves the areas of analysis and reporting required for the EIA Report. It should be noted that with a well filled environmental checklist, the development of the TOR becomes easier and faster. It is mandatory to submit the TOR to the DOE for its approval.

Currently, the developer develops a draft TOR and submits it to the DOE for comments. It is recommended that the DOE sends the TOR for NEAC members to review it. The TOR is then returned to the DOE for final review and approval. This ensures that there are no omissions. Omissions could prove to be very time consuming and costly.

Once the TOR has been decided, the EIA is then conducted and the findings of the study carefully documented in the EIA Report. One copy of the finalized EIA Report is then

submitted to the DOE for preliminary review for compliance with format and the TOR. Thereafter, once approved by the DOE, a digital copy and thirteen hard copies is requested and distributed to all NEAC members.

SECTION 5 THE EIA REPORT

5.1 Required Contents of an EIA Report

The EIA report shall have the following contents (EIA Regulations, 1995, paragraph 19):

- a. Cover Page. A single page listing the title of the proposed project and its location; the name, address, and telephone number of a contact person, a designation of the report as draft or final and a one-paragraph abstract of the EIA report.
- b. Summary. A summary of the proposed project, preferably less than 15 pages in length that accurately and adequately describe the content of the EIA report. The summary should stress the conclusions, areas of controversy and issues yet to be resolved.
- c. Table of Contents. A list and page numbered index of the chapters, sections and subsections in the EIA report, including a list of tables and a list of figures.
- d. Policy, Legal and Administrative Framework. A brief analysis of any relevant policy, legal or administrative issues that may impact on the proposed development.
- e. A description of the proposed development: comprising information about the site, the design and size/scale of the development, and its immediate surroundings.
- f. A description of the environment (local and regional).
- g. Significant Environmental Impacts: the data necessary to identify and assess the main effects which that development is likely to have on the environment.
- h. A description of the likely significant effects: direct and indirect impacts on the environment of the development, explained by reference to its possible impact on:
 - human beings; flora; fauna; soil; water; air; climate change; material assets, including:
 - The cultural heritage and landscape;
 - Natural resources; the ecological balance;
 - Any other environmental factor which needs to be taken into account.
- i. A presentation of all reasonable alternatives in comparative form: exploring each alternative, including the “no-action alternative”, and the reason why certain alternatives were recommended or eliminated. The goal is to identify the least environmentally damaging alternative that satisfies the basic purpose and need of the proposed action.
- j. Environmental consequences of the project as proposed, and briefs of the alternatives assessed, identifying any adverse effects that cannot be avoided if the action is implemented, all mitigation measures to be employed to reduce adverse effects, the relationship between short-term uses of the environment and the enhancement of long-term productivity, and any irretrievable or irreversible commitments of resources that would occur if the actions were implemented as proposed.
- k. A mitigation plan.
- l. A monitoring plan.

- m. Inter-agency and public/NGO involvement.
- o. Report on public hearings.
- p. A summary in non-technical terms of the language used above.
- q. List of Preparers: include a list of the names and a Statement of the professional qualifications of persons who were primarily responsible for the preparation of the EIA report.
- r. Index. A listing of the major components of the EIA report by topics or issues, together with page number references;
- s. Appendices. Materials prepared in connection with an EIA report that substantiate analyses fundamental to the report, that relate to the decision to be made and that should be circulated with the EIA report. They could include data and unpublished Reference documents as well as photo - inventory of site and environs. Materials incorporated by reference are generally included in these appendices.

5.2. Minimum Required Components of the EIA Report

In order to strengthen an EIA report, at the minimum, required components must include, by way of explanation or amplification of any specified information, detailed information on any of the following matters:

- a. The physical characteristics of the proposed development, the land use requirements during the construction and operational Phase.
- b. The main characteristics of the production processes proposed, including the nature and quality of the materials to be used.
- c. The estimated type and quantity of expected residue and emissions (including pollutants of water, air, or soil, noise, vibration, light, heat and radiation) resulting from the proposed development when in operation.
- d. The main alternatives (in outline), if any, studied by the applicant, appellant or authority and an indication of the main reasons for choosing the development proposed, taking into account the environmental effects.
- e. The likely significant direct and indirect effects on the environment by the development proposed which may result from:
 - (i) The use of natural resources;
 - (ii) The emission of pollutants, the creation of nuisances, and the elimination of waste;

These "effects" include secondary, cumulative, short, medium and long term, temporary, positive and negative effects.

- f. The forecasting methods used to assess any impact on the environment about which information is given under sub-paragraph (e);
- g. Any difficulties, such as technical deficiencies or lack of know-how, encountered in compiling any specified information.

Where further information is included in an environmental impact assessment, a non-technical summary of that information shall also be provided.

5.3 Guidelines for the Technical Process

a. Policy, Legal and Administrative Framework

This forms the policy and legal basis within which the proposed project may be implemented. This section should also make reference to any laws, regulations and standards which apply to the project. The objective is to ensure that the proposed project meets policy and legislative criteria and stipulations and will be implemented within the prescribed standards. It should address:

- Environmental quality
- Health and safety
- Protection of sensitive areas
- Protection of endangered species
- Land use control

b. Description of the Proposed Project

This deals with all the activities which will be involved in the proposed project from the construction phase through to start-up, commissioning and operation of the facilities. It provides maps, design drawings, capacity, flow sheets, heat and material balances (inputs and outputs), material characteristics, material handling, waste generation and management and identifies the major machinery and equipment and their characteristics and maintenance requirements.

It provides layout drawings and site plans. It also describes all support activities such as services, staffing and schedules. A critical feature of this aspect of the process is to commence the identification of all activities which could impact on:

- Air quality;
- Soil disturbance and stability;
- Water quality (marine, riverine, ponds and lakes);
- Land quality;
- The socio-economics of the population;
- Cultural and historical heritage resources.

The description should not only be qualitative, but should also be quantitative and time related.

c. Description of the Environment

The checklist in Appendix 1 illustrates the various factors which must be taken into account in describing the environment. These factors in essence form the attributes of both the natural

and man-made environment as well as the historical resources. The socio-economic environment may require the use of not only secondary data sources, but also primary data collected through surveys involving appropriate and acceptable sampling and administration of questionnaires.

The description of the environment forms the environmental baseline prior to project implementation. Among other things, it identifies the various aspects of the environment which could be affected by the project either adversely or beneficially. It also forms the basis for environmental risk assessment and identifies the potential environmental losses which could occur as a result of implementing the project.

It also gives a first hand assessment of whether the project is sustainable, and may not only put existing projects and resources at risk, but also the proposed investment at risk of closure before completing its economic life.

d. Significant Environmental Impacts

Not only should significant impacts be noted but also minor, short term and moderate, direct and indirect potential impacts. Obviously the significant adverse potential impact should also be addressed in the analysis of alternatives and the impact mitigation plan. It is required that developers disclose and discuss cumulative impacts in the EIA reports.

e. Analysis of Alternatives

This section documents all of the alternatives that were taken into account in developing the project, including the no-action alternative. It includes setting, project design, environmental mitigation and protection considerations, production technology, construction technology; operations and maintenance procedures.

A comparative analysis of the alternatives should be provided and as far as possible be illustrated with cost-benefit analyses. Each alternative should be evaluated in respect of its potential environmental impact and capital and operating costs.

Fundamental to the alternative analysis is an evaluation of the no-action alternative. This demonstrates the potential change(s) which implementation of the project could cause.

f. Mitigation Plan

Mitigation plans for each potential adverse impact at each stage of the project should be documented and the cost assessed. This cost should be incorporated in the capital and operating costs of the proposed project. The EIA Report must include a discussion of the efficacy of proposed mitigation measures in addition to the information required above.

In the case of beneficial impacts, it should be illustrated how these impacts may be maximized.

g. Monitoring Plan

A detailed environmental monitoring plan should be prepared, the basis of which is the mitigating measures to be implemented during the construction and operating phases of the project. It should clearly state:

- The parameter(s) to be monitored;
- The methods to be employed;
- The standards to be used;
- The schedule and duration of monitoring;
- The method of recording the results;
- The action to be taken in the event that the ECP is not followed and results are outside of the limits of standards; and
- The format and frequency of reporting.

The cost of implementing the monitoring plan should also be developed. This is essential for the profitability analysis and management plan of the project.

h. The Project Team

Given the inter-disciplinary nature of the environment, it is the responsibility of the proponent to ensure that the team selected to conduct the EIA has the specialist disciplines required and the depth of experience to effectively and efficiently conduct the report.

The proponent should also state the reporting periods throughout the course of implementing the study. Further, he should ensure that the required level and frequency of liaising with the DOE is established and maintained.

The proponent should also provide the project team with all the relevant background information on the project.

i. The EIA Report

The EIA report follows the format previously mentioned and is concise and critical. Uncertainties and data deficiencies should be clearly stated as necessary. Additional TOR should be developed to conduct further studies on any such shortcomings.

SECTION 6 THE DECISION MAKING PROCESS

The decision on the EIA will be made by DOE on the advice of the NEAC. The NEAC will base its recommendation to the DOE on the applicable EIA legislation, the EIA Procedures, the environmental issues involved, the EIA report itself and any comments thereon from the public, NGOs or government agencies. The NEAC takes into consideration: the existing policies or guidelines related to natural resource management and environmental protection and from the meaningful inputs from citizens or organizations. The NEAC will then review and may recommend:

- That the proposed project may not have significant impact on the environment and a letter of environmental clearance is prepared.
- that the proposed project may have no significant negative impact on the environment but which can be mitigated for easily, and a letter of environmental clearance with environmental conditions can be prepared.
- That the proposed project may have significant negative impacts on the environment, and hence an Environmental Compliance Plan (ECP) needs to be developed and signed before a letter of environmental clearance can be prepared.
- that the proposed project may have significant negative impacts on the environment and that it qualifies under the types of projects not to be entertained due to DOE policy.
- that the proposed project could have potentially significant negative impacts and falls under Schedule 2 of the EIA regulations, and a limited level environmental study (LLS) is required.
- That the proposed project may have significant negative impacts on the environment and an Environmental Impact Assessment (EIA) is required.

The NEAC will be chaired by the Chief Environmental Officer and will be comprised of the following:

- Chief Environmental Officer or his nominee
- Commissioner of Lands or his nominee;
- Director of Health Services or his nominee;
- Chief Forest Officer or his nominee;
- Fisheries Administrator or his nominee;
- Chief Meteorologist or his nominee;
- Director of Geology and Petroleum or his nominee;
- Chief Engineer or his nominee;

- A suitably qualified person trained in Coastal Zone or marine resources management or related field, on the recommendation of the Department;
- A suitably qualified person trained in Human Development or Social Services, on the recommendation of the Department;
- A suitably qualified person representing a Tertiary Level Institution, on the recommendation of the department; and two representatives from registered NGOs or private sector Representatives appointed by the Minister on the recommendation of the Department, and who shall serve for a period not exceeding two years.

Of the thirteen members of the NEAC, seven shall constitute a quorum for meetings of the committee and any NEAC meeting shall be chaired by the Chief Environmental Officer or his nominee. In addition to the above membership, the NEAC could invite other persons to attend meetings as and when their special expertise is required.

SECTION 7: MONITORING AND ENFORCEMENT

7.1 Introduction

Monitoring and enforcement are the last phases in the process. The purpose of this section is to examine the need for and to make recommendations on monitoring procedures that follows the arrival of a project. Monitoring activities shall also be applicable even when an undertaking was exempted from an EIA report.

A monitoring program can have three uses. It can determine the level of compliance with conditions of approval or exemption or other standards; it can help to develop an enforcement program to give assurance of compliance; and monitoring can be a source of information for the study of environmental effects.

7.2 Monitoring Compliance with Conditions and Standards

Compliance monitoring is used to show how well an undertaking has been constructed, implemented and operated in accordance with the standards, terms and conditions of approval, and commitments contained in the Environmental Compliance Plan (ECP).

A well-designed programme can benefit developers as well as regulatory agencies. Proper awareness and surveillance help identify and deal with on-site problems quickly, so as to reduce possible environment damage, public complaints and delays to the construction schedule. It can also facilitate the timely clarification and interpretation of approval conditions or indicate a need for modification.

The EPA requires an EIA to contain a prediction of effects on the environment and a description of action to mitigate those effects. Section 20 (7) allows authorities to attach terms and conditions to the approval of a project. Responsibility for meeting approval requirements rests with the developer.

For the purpose of compliance monitoring and for management of project implementation there is a need for consolidation of conditions and commitments into one easily referenced format, the ECP. The DOE should enter into this formal agreement with the developer who is responsible for complying with commitments and statements of intent contained in the EIA document that relate to the implementation of the project.

The completion of any obligation should be reported along with proper verification from the DOE. A final report on compliance shall be contained in the Project Completion notice to advise that project implementation has been completed in accordance with all commitments, terms and conditions of approval.

7.3 Verification and Enforcement of the Environmental Compliance Plan

An effective compliance monitoring program must have means to verify that terms and conditions have been met and systems of enforcement with appropriate penalties for non-compliance are contained in the ECP. To establish if compliance has been achieved, some form of verification is necessary. There are three basic ways to obtain verification: supervision, surveillance and auditing.

Supervision indicates a program carried out by the proponent to ensure that the project is built and operated according to environmental specifications including any terms and conditions of approval, for instance for the use of special construction and mitigation practices to minimize impacts. Field inspections would be required to monitor environmental conditions and usually to report on problems encountered and the action taken. The determination of what constitutes a "violation", and the nature of verification and reporting is left to the discretion of the proponent. For many commitments and conditions this form of verification may be appropriate.

Surveillance or compliance is undertaken by the regulatory agencies to ensure conditions of approval are implemented and all statutes and regulations are obeyed. A surveillance or compliance officer may undertake field inspections and liaise regularly with the proponent, government agencies and the public to resolve problems. Field reports by the officer would provide the necessary verification of compliance with the ECP for those conditions and standards under their jurisdiction.

Auditing can examine the overall performance and effectiveness of environmental monitoring programs from both an administrative and operational perspective. Independent audits are useful in determining whether adequate regulatory procedures are in place and effectively administered; whether verifiable reporting and documentation is available and whether environmental benefits are evident as a result of compliance.

The Department may by notice require the owner or operator of any factory, industrial plant or similar facility to undertake an environmental audit on the process utilized in such factory, industrial plant or similar facility, the type of effluent discharged by such a factory, industrial plant or similar facility, as well as steps being taken to control or reduce pollution, and to submit the environmental audit to the Department within such time as may be specified by the Department (Pollution Regulations # 57.1).

The recommended approach to verification and enforcement is a combination of supervision, surveillance and auditing. To continue the principle that the proponent have as much involvement and responsibility as possible in the EIA process, the onus for verifying and reporting compliance should remain with them. DOE should coordinate and administer the program and be responsible for overall compliance and enforcement. Any violation or lack of compliance would be addressed by DOE.

7.4 Environmental Effects Monitoring

Environmental effects monitoring involves recording and comparing conditions before, during and after project implementation to determine the actual environmental impacts and net changes caused by an undertaking. It depends on base-line data collected prior to the start of construction as well as field data collection during and after construction, frequently extending beyond the period of compliance monitoring. Comparing this information to the effects predicted in the EIA can establish the accuracy and relevance of prediction in the planning and decision-making process. Effects monitoring results can also be used to assess the effectiveness of mitigation measures and construction techniques to reduce impacts. It can provide information on the "net environmental effects" remaining after mitigation and restoration have been applied. Thus environmental effects monitoring helps to evaluate, critique and improve the effectiveness of assessment methods, impact prediction models, and construction mitigation techniques. Monitoring studies also advance the scientific knowledge of those involved of the biophysical effects and inter-relationships as well the understanding of social realities.

The technical benefits outlined above are all potentially advantageous to proponents. Furthermore, achieving a better understanding of effects can help to reduce controversy and build public confidence in a proponent's prediction and mitigation proposals. Finally, the citing of monitoring study results as evidence at hearings could reduce the need for certain conditions of approval.

Section 8. Bibliography

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APPENDIX I

CHECKLISTS THAT DESCRIBES THE ENVIRONMENTAL SETTING OF PROJECT PROPOSALS SUBMITTED TO THE DOE

PURPOSE OF CHECKLIST

The Department of the Environment requests all public and private agencies, corporations and individuals to consider the environmental impacts of a proposed project before making decisions. In accordance with the Environmental Protection Act, an environmental impact assessment (EIA) must be prepared for all project proposals with potential adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to assist the proponent and the Government of Belize, to identify impacts of a proposal and to take adequate and practical measures to mitigate any adverse environmental impacts that may result from the proposal. This checklist will also help the Department of the Environment decide whether an EIA is required for said proposal.

INSTRUCTIONS FOR APPLICANTS

This environmental checklist asks you to describe some basic information about your proposal. The Department of the Environment will use this checklist to determine whether the environmental impacts of your proposal are significant, requiring the preparation of an EIA. Please answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If a question does not apply to your proposal, write **"DOES NOT APPLY"**.

Complete answers to the questions now may avoid unnecessary delays later. Some questions ask about governmental regulations. Answer these questions if you can. If you have problems, the governmental agencies can assist you. The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The Department of the Environment, to which you must submit this

checklist, may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Available at the DOE are the checklists for the following sectors:

1. Petroleum
2. Mining
3. Tourism
4. Sub-divisions/Construction
5. Light Industry
6. Agriculture

APPENDIX II

LIST OF PERMITTING AGENCIES

STATUTE	PERMIT	AGENCY
Forest Act	Timber Logging Permit	Forest Department
Mangrove Regulations	Mangrove Clearance Permits	Forest Department
Land Utilization Act	Subdivision Approval	Land Utilization Authority
Mines & Minerals Act	Mining Licenses	Geology and Petroleum Department
Mines & Minerals Act	Dredging Permits	Geology and Petroleum Department
Mines & Minerals Act	Private and Public (Village Councils) Quarry Permit	Geology and Petroleum Department
Petroleum Act	Petroleum Exploration License	Geology and Petroleum Department
Export Processing Zone Act	Special Export Processing Zone Status	Ministry of National Development
Fiscal Incentives Act	Fiscal Incentives	Ministry of National Development-BELTRAIDE
Fisheries Act	Fishing Licenses & Research Permits	Fisheries Department
Port Authority Act	Permits for Construction of Marinas and Piers	Port Authority
Belmopan(New Capital) Interim Provisions Act	Building Permits	Belmopan City Council
Hotels Act	Hotel License	Belize Tourist Board
Belize City Building Act	Building Permits for Belize City	Housing and Planning Department
Housing and Town Planning Act	Building and Planning Permits for Ambergris Caye	Housing and Planning Department
Housing and Town Planning Act	Planning Permits for Belize City	Housing and Planning Department
Local Government Act (By-Laws made under Act)	Building Permits and Sand Permits for Dangriga	Dangriga Town Council
Idem	Building Permits for Corozal Town	Corozal Town Council
Idem	Building Permits for Punta Gorda Town	Punta Gorda Town Council
National Lands Act	Lease of National Lands	Ministry of Natural Resources & the Environment
National Lands Act	License to Erect Piers	Ministry of Natural Resources & the Environment
Trade Licensing Act	Trade Licenses	Trade Licensing Boards
Factories Act	Registration of Factories	Labour Department
NICH Act	Permit to alter/remove mounds and antiquities	Institute of Archaeology

APPENDIX III
LIST of EIA Preparers

Prepared by the Department Of the Environment:

The following is a list of companies who have submitted Environmental Impact Assessments (EIA) to the Department of the Environment, or provided environmental consulting services. The Department of the Environment (DOE) would like to make it clear that it is not in any way responsible for the actions of any EIA Preparer. In addition, the DOE does not recommend any organization over the other; it is the sole responsibility of the developer to choose between the EIA preparers.

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