

# **VOLUME 2**

## **SECTION 2**

### **GUIDELINES FOR CONDUCTING ENVIRONMENTAL IMPACT ASSESSMENTS AND PUBLIC HEARINGS**

**The Responsibility  
National Planning and  
Environmental Agency (NEPA)  
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# CHAPTER I

## GENERAL INFORMATION

### 1.0 BACKGROUND

Natural systems and processes are often subject to disruptions and/or changes that affect them adversely. Human interactions with natural systems affect environmental quality and in turn human settlements and livelihoods. The need to manage this interaction is termed environmental management. Scientific studies on the physical, biological/ecological and social characteristics of planet earth have contributed to the understanding of environmental systems, and the results of these multifaceted and sometimes interdisciplinary studies help to guide assessments of the interaction between human endeavour and natural systems.

The production of goods and services to meet global population demands has occasioned a number of activities which have depleted the globe's natural resources and in several instances contributed to environmental degradation through pollution. These activities, often undertaken in the pursuit of economic development, have also resulted in the loss of several species of plants and animals and if left uncontrolled can threaten the existence of man himself.

This section of the manual is one means by which developers will receive guidance on the processes in place to conserve and sustainably use natural resources in order to strive towards the goal of sustainable development of Jamaica. Recognition of the question of the globe's capacity to sustain these activities and the general environmental problems associated with them, which are common at the community, national, regional and international levels, led to a number of international conferences, (starting at Stockholm in 1972) treaties, conventions and protocols on the management of the earth's resources in an effort to ensure sustainable economic development.

### 1.1 SMALL ISLAND DEVELOPING STATES (SIDS)

Small Island Developing States (SIDS) have limited land space and fragile ecosystems, particularly those of the Caribbean. The need to improve the economy and social issues including poverty reduction and all their ramifications has increased the imperative for development. The challenge to harmonise development with sound environmental management principles is often monumental. Various policies, procedures, processes and tools have evolved to assist with environmental management. One such tool is the Environmental Impact Assessment (EIA). The EIA process has itself undergone evolutionary changes

because of technological advances and more data having become available on natural systems, and on human development and the built environment.

## **1.2 CONDUCTING AN EIA**

This Guideline document presents procedures for conducting an EIA in accordance with the legal and regulatory framework of Jamaica, ecological realities and development imperatives of the island and international agreements and standards for sustainable development.

## CHAPTER 2

### GUIDELINES FOR CONDUCTING ENVIRONMENTAL IMPACT ASSESSMENTS

#### 2.0 PURPOSE

##### 2.0.1 Previous Guidelines

Guidelines for conducting Environmental Impact Assessments were first produced by the Natural Resources Conservation Authority (NRCA) in July 1997, as a means of assisting developers and environmental consultants to understand the NRCA requirements for EIAs. This followed on from the introduction of the Permit and Licence System on January 1, 1997, which spoke to the new requirements for the conduct of EIAs for certain types of developments.

##### 2.0.2 Lessons Learnt

Eight years later, much has been learned through the permit and licence application process as well as through the EIAs that have been conducted and submitted to the NRCA and now NEPA, over these years.

##### 2.0.3 Review

NEPA has undertaken a review of the EIA Guidelines previously used in an effort to update the document, to incorporate emerging global issues, and natural hazard impacts as well as to create a more user friendly and practical set of guidelines for developers and consultants.

##### 2.0.4 Present Guidelines

This document presents the revised guidelines, which will provide clear guidelines for conducting and reporting on EIA studies in a useful form that can guide decisions on development in Jamaica.

## **2.1 THE NATIONAL ENVIRONMENT AND PLANNING AGENCY (NEPA)**

### **2.1.1 The N.R.C.A Act**

In 1991, the Government of Jamaica promulgated the Natural Resources Conservation Authority Act by which an Authority (the NRCA) was established to provide for the management, conservation and protection of the natural resources of Jamaica. The NRCA, was also charged with administering the Beach Control Authority Act (1956) the Watershed Protection Act (1963) and the Wildlife Protection Act (1945).

### **2.1.2 Formation of NEPA**

In 2001, three entities were merged, the NRCA, the Town Planning Department (TPD) and the Land Development and Utilisation Commission (LDUC) to form the National Environment and Planning Agency (NEPA). NEPA therefore has responsibility for reviewing applications and providing technical advice to the various authorities/commissions charged with making decisions under the acts mentioned above, as well as the Town and Country Planning Act, and the Land Development and Utilization Act.

The two authorities and the commissions for which NEPA provides services are the Natural Resources Conservation Authority (NRCA) which has a statutory mandate for the conservation, protection and proper management of the natural resources of Jamaica; the Town and Country Planning Authority (TCPA) which has the statutory mandate to ensure the orderly planning of Jamaica, and the Land Development and Utilization Commission (LDUC) with a statutory mandate to ensure that prime agricultural lands are kept in agricultural production in the interest of food security and self sustainability. NEPA also advises the KSAC, the Portmore Municipality and the local planning authorities/Parish Councils.

## **2.2 CONTEXTUAL FRAMEWORK**

### **2.2.1 Environment and Development**

- i The island of Jamaica covers a land area of 11, 500 square kilometres. Adjacent territorial seas (12 mile radius) and an Exclusive Economic Zone (EEZ) were declared in 1996 and 1991 respectively. The island accommodates a population of 2.6 million (Census 2001) with increasing numbers occupying urban spaces (52%, 2001). Settlement and livelihood patterns have influenced the state of the environment across the country, and interacting

with development imperatives and the natural resource base, these patterns are increasingly aggravating environmental degradation.

- ii Integrating environmental considerations with development planning and programme development is essential to the sustainable development of Jamaica. This small island state with pressing problems of poverty and social needs, must also seek to reduce its vulnerability to local and external economic shocks and from a variety of man made and natural hazards which seem to be increasing in frequency and ferocity. The need to deal with flood and other damage has resulted in detrimental budgetary changes annually over the past five years. Other damages including slope failures have necessitated road repairs and infrastructure replacement. Damages have dislocated livelihoods and caused loss of earnings to many persons. Sound environmental management, if practised, will also reduce disasters. In that regard, NEPA has sought to enhance the environmental assessment process to meet the national mandate of balancing economic development programmes and projects with environment, economic development, and social justice.

### **2.2.2 The Project Cycle**

It has been demonstrated that environmental assets can be enhanced and liabilities reduced if environmental assessments are appropriately integrated throughout the project cycle. Project identification should be accompanied by screening for environmental issues (including natural hazard risk), and pre-feasibility analysis should include scoping of the issues identified through the screening process. The feasibility study that follows should then include an Environmental Impact Assessment if the screening and scoping processes identify that need. The site and project-specific assessment will include more detailed investigation and identify positive and negative impacts. Mitigation measures may be suggested where deemed appropriate and these should then be integrated into project design and implementation procedures. During the operational phase of the project, a monitoring and evaluation program should also include the identified and recommended environmental parameters.

## **CHAPTER 3**

### **ENVIRONMENTAL IMPACT ASSESSMENTS**

#### **3.0 WHAT IS THE EIA?**

The environmental impact assessment (EIA) involves the process of identifying, predicting and evaluating potential environmental impacts of development proposals. The term describes the techniques and processes by which information about the interaction between a proposed development project and the environment is collected, analysed and interpreted to produce a report on potential impacts and to provide the basis for sound decision-making. The results of the study are taken into account by the Regulatory Authority in the determination of whether the proposed development should be allowed and under what conditions.

##### **3.0.1 Environment**

The term 'environment' in this regard, includes all relevant aspects of the natural, human or built environment of the project development site, as well as the areas within the sphere of influence (setting/situation) of the proposed development. The EIA investigates the characteristics of the environment into which the development will be placed and evaluates the expected interaction with the physical, biological and built environment. The EIA is therefore based on predictions, and must use informed and experienced professional judgment based on scientific methods to attempt to predict the potential changes in environmental quality which could result from the proposed project/action, or the proposed challenges that the environment may present to the development.

##### **3.0.2 Multi-Disciplinary and Inter-Disciplinary Approach**

The study therefore requires a multi- and inter-disciplinary approach to be undertaken by experienced professionals. It should be carried out as integral to the project evaluation process, adding an environmental dimension to the financial and economic feasibility analysis.

##### **3.0.3 A Management Tool**

The EIA also compares various alternatives by which the project could be realized and seeks to identify the one which represents the best



combination of economic and environmental costs and benefits. Alternatives include location (as may be applicable) as well as approaches to design, process and construction technology. The EIA is one of the most commonly used environmental management tools to integrate environmental concerns effectively into project design and the development process. EIA means an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development.

### 3.0.4 Procedure

The EIA as a procedure is used to examine both beneficial and adverse environmental consequences of a proposed development project and should be viewed as an integral part of the project planning process. Findings of the study should be taken into account in project design and recommendations implemented should the project be approved.

## 3.1 DEFINITION OF EIA

Three definitions of an Environment Impact Assessment are given below:

- i The EIA is the need to “identify and predict the impact (of the environment and) on man’s health and well-being of legislative proposals, policies, programmes, projects and operational procedures, and to interpret and communicate information about the impacts”

*(Munn, 1979)*

- ii “The term ‘environmental assessment’ describes a technique and a process by which information about the environmental effects of a project is collected, both by the developer and from other sources, and taken into account by the planning authority in forming their judgments on whether the development should go ahead”.

*(UK DoE, 1989)*

- iii EIA is “an assessment of the impact of a planned activity on the environment”.

*(UN Economic Commission for Europe, 1991)*

In addition to the definitions above, the following definitions are extracts from EIA

guidelines document prepared by NEPA and available on NEPA's website:

"An EIA is a study of the effects of a proposed action on the environment. In this regard the environment includes all relevant aspects of the natural and human resources. The EIA evaluates the expected effects on human health, the natural environment and on property."

"The EIA attempts to weigh environmental effects on a common basis with economic costs and benefits..." It is a decision-aiding tool.

"The EIA is a procedure used to examine the environmental consequences, both beneficial and adverse, of a proposed development project and to ensure that these effects are taken into account in project design."

## **3.2 UNEP GOALS AND PRINCIPLES OF EIA**

The NRCA, since its inception has adopted the goals and principles of the EIA as articulated by the United Nations Environment Programme (1987). As UNEP has indicated these goals and principles are necessarily general in nature and may be further refined when fulfilling EIA tasks at the national, regional and international levels.

### **3.2.1 GOALS**

- i To establish that before decisions are taken by the competent authority or authorities to undertake or to authorize activities that are likely to significantly affect the environment, the environmental effects of those activities should be taken into account.
- ii To promote the implementation of appropriate procedures in all countries consistent with national laws and decision-making processes, through which the foregoing goal may be realized.
- iii To encourage the development of reciprocal procedures for information exchange, notification and consultation between States when proposed activities are likely to have significant trans-boundary effects on the environment of those States.

### 3.2.2 Principles

- i **Principle 1:** States (including their competent authorities) should not undertake or authorize activities without prior consideration, at an early stage, of their environmental effects. Where the extent, nature or location of a proposed activity is such that it is likely to significantly affect the environment, a comprehensive environmental impact assessment should be undertaken in accordance with the following principles.
- ii **Principle 2:** The criteria and procedures for determining whether an activity is likely to significantly affect the environment and is therefore subject to an EIA, should be defined clearly by legislation, regulation, or other means, so that subject activities can be quickly and surely identified, and EIA can be applied as the activity is being planned.
- iii **Principle 3:** In the EIA process the relevant significant environmental issues should be identified and studied. Where appropriate, all efforts should be made to identify these issues at an early stage in the process.
- iv **Principle 4:** An EIA should include, at a minimum:
  - A description of the proposed activity;
  - A description of the potentially affected environment, including specific information necessary for identifying and assessing the environmental effects of the proposed activity;
  - A description of practical alternatives, as appropriate;
  - An assessment of the likely or potential environmental impacts of the proposed activity and alternatives; including the direct, indirect, cumulative, short-term and long-term effects;
  - An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;

- An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;
  - An indication of whether the environment of any other State or areas beyond national jurisdiction is likely to be affected by the proposed activity or alternatives.
  - A brief, non-technical summary of the information provided under the above headings.
- v **Principle 5:** The environmental effects in an EIA should be assessed with a degree of detail commensurate with their likely environmental significance.
- vi **Principle 6:** The information provided as part of EIA should be examined impartially prior to the decision.
- vii **Principle 7:** Before a decision is made on an activity, government agencies, members of the public, experts in relevant disciplines and interested groups should be allowed appropriate opportunity to comment on the EIA.
- viii **Principle 8:** A decision as to whether a proposed activity should be authorized or undertaken should not be taken until an appropriate period has elapsed to consider comments pursuant to principles 7 and 12
- ix **Principle 9:** The decision on any proposed activity subject to an EIA should be in writing, state the reasons therefore, and include the provisions, if any, to prevent, reduce or mitigate damage to the environment. This decision should be made available to interested persons or groups.
- x **Principle 10:** Where it is justified, following a decision on an activity which has been subject to an EIA, the activity and its effects on the environment or the provisions (pursuant to Principle 9) of the decision on this activity should be subject to appropriate supervision.
- xi **Principle 11:** States should endeavour to conclude bilateral, regional or multilateral arrangements, as appropriate, so as to provide, on the basis of reciprocity, notification, exchange or information, and agreed-upon consultation on the potential

environmental effects of activities under their control or jurisdiction which are likely to significantly affect other States or areas beyond national jurisdiction.

xii **Principle 12:** When information provided as part of an EIA indicates that the environment within another State is likely to be significantly affected by a proposed activity, the State in which the activity is being planned should, to the extent possible:

- notify the potentially affected State of the proposed activity;
- transmit to the potentially affected State any relevant information from the EIA, the transmission of which is not prohibited by national laws or regulations; and
- When it is agreed between the States concerned, enter into timely consultations.

xiii **Principle 13:** Appropriate measures should be established to ensure implementation of EIA procedures.

## CHAPTER 4

### JAMAICA - STATUTORY REQUIREMENTS

#### 4.0 THE NATURAL RESOURCES CONSERVATION ACT (NRCA)

The NRCA Act and subsequent legislation and regulations stipulate that persons undertaking new developments, which fall within a prescribed category will require a permit. Licences will be required for the discharge of trade or sewage effluent and for the construction or modification of facilities. As part of the permit application an EIA may be required.

Sections 9 & 10 of the NRCA Act gives the Authority the power to request that an environmental impact assessment be conducted as part of a permit application. The Authority also has the power to request that the applicant furnish documents or information as the Authority thinks fit. Criteria for requesting this information may include the urgency, the level of technology employed in the operation of the project, and the likely adverse impacts to be expected from the project.

Under the Act the NRCA is also authorized to issue, suspend and revoke permits and licences if facilities are not in compliance with the environmental standards and conditions of approval stipulated.

#### 4.1 PRESCRIBED CATEGORIES

The following is a list of prescribed categories under the NRCA Act.

- Development projects
  - Subdivisions of 10 to 50 lots
  - Subdivisions of 51 lots or more
  - Housing projects of 10 to 50 projects
  - Hotel resort complex of 12 to 50 rooms
  - Hotel resort complex of 51 rooms or more
- Citrus, coffee, cocoa, coconut, sugar cane processing factories
- Solar salt production
- Watershed development and soil conservation projects including river training such as river channel diversion works and works for the transfer of water resources between river basins, check dams,

and retaining walls

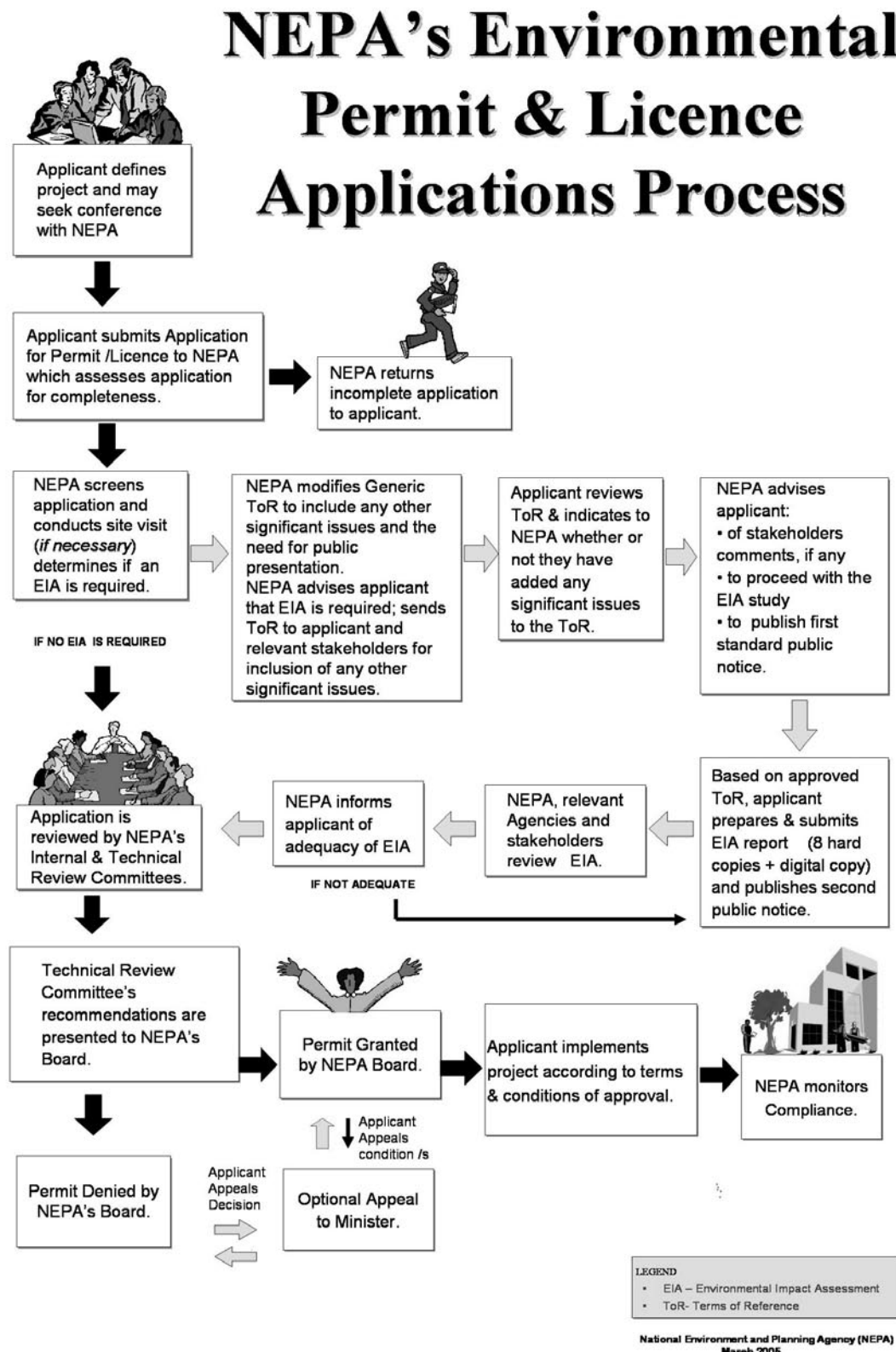
- Agro processing and processing of agricultural wastes
- Office complexes of 5000 square meters or greater
- Eco-tourism and nature tourism projects
- Water treatment facilities, including water supply and desalination plants
- Fish and meat processing
- Food processing plants
- Detergent manufacturing including manufacturing of soap
- Manufacturing of containers and package materials including cans, bottles, boxes and cartons
- Distillery brewery and fermenting facilities
- Manufacturing of edible fats, oil and associated processes
- Tanners
- Boxing plants
- Manufacturing of textiles
- River basin development and improvement
- Irrigation and water management and improvement projects
- Slaughter house and abattoirs
- Theme parks
- Hospitals
- Airports and air fields, including runway expansion greater than 20% of the original length

- Sewage and industrial waste water treatment facilities
- Metal processing
  - Ferrous metals
  - Non ferrous metals
  - Metal Plating
  - Foundry operations
- Industrial projects
  - Chemical plants
- Pulp, paper and wood processing
- Petroleum production, refinery, storage, and stockpiling
- Cement and lime production
- Paint manufacture
- Manufacturing of pesticides or other hazardous or toxic substances
- Construction of new highways, construction of arterial roads, construction of new roads on slopes greater than 20 degrees, major road improvement projects including construction of a road of 4 or more lanes or realignment or widening or an existing road into four lanes where such road realignment or widening would be ten (10) kilometers or more in continuous length
- Land reclamation and drainage projects
- Modification, clearance or reclamation of wetlands
- Dredging, excavation, clearing and reclamation of riverine, swamp, beach wetlands or marsh areas
- Solid waste treatment and disposal facilities including waste disposal installation for incineration and chemical landfills or systems for the destruction reprocessing or recycling of such waste



- Cemeteries and crematoria
- Introduction of flora, fauna and genetic material
- Introduction of genetically modified organisms
- Hazardous waste storage, transportation, treatment or disposal facilities
- Clear cutting of forested areas and clearing of trees on land of 3 hectares and over on slopes greater than 25 degrees
- Golf Courses
- Transportation centres for more than 10 vehicles
- Construction or demolition of reservoirs, dams, dykes and aqueducts
- Railways, tramways, and cable car operations
- Causeway and multiple span bridges
- Shopping centres
- Aquaculture facilities and ponds and intensive fish farming
- Storage of scrap metal including derelict vehicles
- Off shore drilling for extraction of oil, natural gas or minerals
- Dry cleaning operations
- Mining, quarrying and mineral processing, bauxite, peat, sand, minerals, including aggregate, construction and industrial materials
  - Metallic
  - Non metallic
- Ship yards
- Marinas and boat yards

Figure 1: The Application Process



- Power generation plants including hydroelectric plants and installations for the harvesting of wind power for energy production and nuclear reaction above one megawatt
- Electrical transmission lines and substations greater than 69 kv
- Pipelines and conveyors including underground cables, gas lines, and other such infrastructure with a diameter of more than 10 centimeters for the transport of gas, oil, or chemicals
- Port and harbour development

## CHAPTER 5

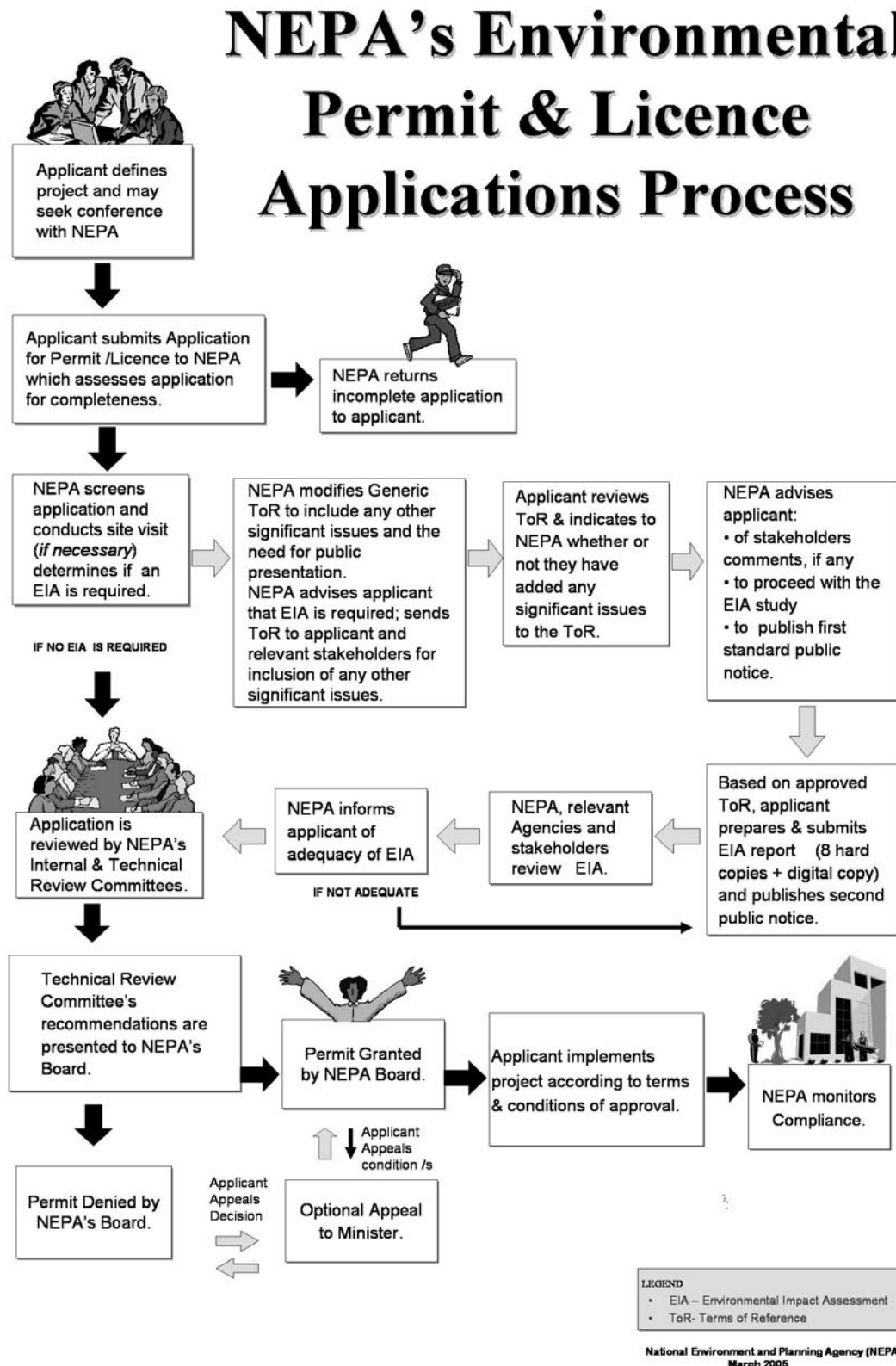
### ENVIRONMENTAL PERMIT AND LICENCE APPLICATIONS

#### 5.0 THE APPLICATION PROCESS

An applicant is required to complete an application form (for permit and or licence) and a Project Information Form (PIF) for submission to the NEPA. The Permit Application and Project Information forms require description of the project as well as selected aspects of the existing biophysical and built environment into which the project will be placed. These forms can be obtained at NEPA and at the regional offices of the Jamaica Information Services. Guidelines for Project Proponents are issued along with application forms. (See Volume 2 Section 1 for more details)

The Application Process as managed by NEPA is governed by the Permit and Licence System, which came into effect on January 1, 1997, and is shown in Figure 1. The Permit & Licence System (P&L) is a mechanism to ensure that all Jamaican facilities (developments), within the prescribed categories, meet required standards in order to minimize negative environmental effects.

Figure 1: The Application Process



## 5.1 REQUIREMENTS OF THE SYSTEM

The System seeks to:

- i Ensure compliance with Sections 9 & 10 of the NRCA Act of 1991, which gives the NRCA the right to issue permits to persons undertaking new developments and request EIA studies where necessary.
- ii Ensure that environmental considerations are taken into account early in the planning of new projects.
- iv Monitor the discharge of certain waste into the environment.
- v Ensure compliance with established NRCA environmental standards and conditions of approval.
- vi Ensure that goods and services are produced in an environmentally sound manner.
- vii Bring existing facilities into compliance with environmental standards.

Persons undertaking new developments that fall within a prescribed category are required to obtain a permit. Licences will be required for the discharge of trade or sewage effluent and for the construction or modification of facilities.

## 5.2 THE NEPA SCREENING AND SCOPING PROCESS

### 5.2.1 Screening

The application forms when received by NEPA are examined by the relevant technical officers within NEPA and in association with the respective technical support GOJ agencies. This screening seeks to identify aspects of the development, and their predicted interaction with the existing environment, and the findings help to determine the level of investigation required to inform the permitting process. Where potentially significant environmental issues are identified further study through an environmental impact assessment may be required. Where potential environmental impacts are deemed minimal, no EIA may be required. Should an EIA be deemed necessary the project proponent and/or their representatives will be provided with the Terms of Reference generic to the

category of development with issues highlighted for particular attention.

### **5.2.2 Terms of Reference of EIA**

NEPA has developed Generic Terms of Reference for different categories of development. These can be obtained from NEPA. The respective TORS need to be modified as appropriate to the respective development project, and submitted to NEPA for approval. The final scope of the EIA study will be agreed between the project proponent and NEPA, and the EIA study will then proceed in accordance with the approved TORS.

### **5.2.3 Public Presentation**

In requesting an EIA, a public presentation may be required. This decision is dependent on the scale and magnitude of the potential impacts and other factors such as the ecological sensitivity of the area as well as public interest. The public exposure of and meeting on the EIA report gives the proponent an opportunity to respond to issues raised by the public and make any necessary changes to the project.

### **5.2.4 Public Notice if EIA Required**

If an EIA is required, the applicant will be notified within ten (10) working days of NEPA's receipt of the application. The applicant will then be required to post two notices to the public.

i This first public notice - Sample 1, Public Notice No 1 (See Appendix I)- will indicate that

- an EIA has been requested by NEPA
- a public presentation is required
- how the public can access the ToRs for review.

This will allow the public to do their own research/gather information on the project/site etc. if they wish to do so.

ii The second public notice - Sample 2, Public Notice No 2 (See Appendix)- will indicate that

- the EIA has been submitted to NEPA;
- where the public can access the EIA report for perusal
- when and where the public presentation will be convened

NB. The Authority from time to time, reserves the right to waive the requirement for a public presentation. Please modify Second public Notice (Sample 2) accordingly.

The public presentation should be conducted no less than 3 weeks after the notice has been published by the applicant.



## CHAPTER 6

### THE ENVIRONMENTAL ASSESSMENT STUDY

#### 6.0 THE EIA METHODOLOGY

The Environmental Impact Assessment (EIA) methodology includes a number of steps as outlined below.

##### 6.0.1 Steps in Data Collection and Analysis

The EIA study is based on a systematic process which includes the following steps:

- i Description of the proposed project
- ii Description of the proposed site location
- iii Liaison with NEPA to determine legal requirements
- iv Determination of the Terms of Reference and Scope of Work (NEPA Generic Terms of Reference for different types of development are presented in Annex II)
- v Collection and Analysis of Baseline Data Conditions
- vi Identification and Description of Applicable Legal and Regulatory Framework
- vii Identification of Critical Issues
- viii Determination of Potential Impacts
- ix Determination of Relevant Mitigation Measures
- x Consideration of Project Alternatives
- xi Determination of Environmental Quality Objectives (Recommendations for Sound Environmental Management/Best Practices)
- xii Identification of Post Permit Requirements

The presentation of data for the EIA must include information from existing studies and reports as well as current data from field research. All information should be properly sourced to indicate accuracy on the level of information and the date of the information being presented.

## 6.1 DATA SOURCES

Information should be obtained from recognized and specialized sources such as the following:

- i Libraries at universities and other academic institutions (University of the West Indies, University of Technology, etc.)
- ii Government agencies (Water Resources Authority, National Works Agency, Public Health Department, National Environment and Planning Agency, Mines and Geology Division, Office of Disaster Preparedness and Emergency Management, Meteorological Office, Forestry Department, etc.)
- iii Non-governmental Organisations (Jamaica Environment Trust, Jamaica Conservation and Development Trust, Friends of the Sea, Northern Jamaica Conservation Association, Caribbean Coastal Area Management, etc.)
- iv Internationally funded projects (Coastal Water Quality Improvement Project, Trees for Tomorrow, etc)
- v Legal Instruments, Policies and Regulations from NEPA and other relevant agencies should also be consulted and referred to.
- vi International documents relevant to the proposed development

## 6.2 RECOMMENDED TEXTS

A list of recommended texts, which details aspects of EIA Methodology, is given below:

- i Y. J. Ahmad and G. K. Sammy: **Guidelines to Environmental Impact Assessment in Developing Countries** UNEP Regional Seas Reports and Studies No. 85, UNEP, 1987.
- ii World Bank Technical Paper Number 139: **Environmental**

**Assessment Sourcebook, Vols. I - III**, Environment Department, World Bank, Washington D.C., December 1991.

- iii Jones Williams, Margaret. *Environmental Impact Assessment EM614. Course Material* M.Sc. Natural Resources Management, UWI Mona 2004.
- iv Glasson: John, Riki Therivel and Andrew Chadwick **Introduction to Environmental Impact Assessment: The Natural and Built Environment-** Series I, (1994)
- v Caribbean Development Bank **NHIA-EIA** Sourcebook (in progress)

### 6.3 DESCRIPTION OF THE EXISTING ENVIRONMENT – BASELINE STUDIES

An EIA must be a site specific and project specific study. An EIA for a particular development in a particular setting cannot be transferred either to another development or even the same development in another setting.

The EIA is a multi-disciplinary study that must span the relevant aspects of the natural and built environments. Critical areas to be studied will be dependent on the project site and the project details. A checklist gives some of these critical factors, which should be considered as may be relevant in describing the environment. This description of the environmental setting is a record of conditions prior to implementation of the proposed project. It is primarily a benchmark against which to measure environmental changes and to assess potential impacts.

Data Collection and Interpretation should involve a combination of: desktop research including satellite imagery, project related documents, review of relevant literature, topographical maps and site plans; field reconnaissance and investigation; and structured interviews. Each of the realms of environmental data should be investigated, viz. physical, biological and human, and the relevant aspects included in the study.

## 6.4 BASIC CHECKLIST OF CRITICAL ASPECTS TO BE CONSIDERED IN AN EIA

### 6.4.1

#### Box I.

#### PHYSICAL ENVIRONMENT

##### a. Climatic variables

Rainfall patterns – mean, mode, seasonality  
 Temperature patterns  
 Extreme events  
 Climate change projections  
 Prevailing Wind - direction, speed, anomaliesns

##### b. Geology

Underlying rock type  
 Surficial material  
 Geologic structures (faults etc.)  
 Geologic resources (minerals,etc.)

##### c. Topography

Slope form  
 Landform and terrain analysis  
 Specific landform types

##### d. Coastal dynamics and morphology

Wave patterns  
 Currents  
 Shoreline morphology – nearshore, foreshore  
 Sediment – characteristics and transport

##### e. Soil

Type and characteristics  
 Porosity and permeability  
 Sub-soil permeability  
 Run-off rate  
 Effective depth (inches/centimetres)  
 Inherent fertility  
 Suitability for method of sewage disposal

##### f. Drainage

Surface hydrology  
 Drainage network  
 Rainfall runoff relationships  
 Hydrogeology  
 Groundwater characteristics – springs, etc.

##### g. Water Quality

Terrestrial - rivers, lakes, ponds, gullies  
 Coastal

##### h. Air Quality

Ambient  
 Respirable  
 Airshed Importance  
 Odour levels

##### i. Noise

##### j. Natural Hazard Risk - See Box II

## 6.4.2

### BOX II

### NATURAL

### HAZARD RISK

- a. Seismicity**  
Earthquake hazard; liquefaction potential, tsunami
- b. Slope stability**  
Landslide potential
- c. Soil erodibility**
- d. Flood hazard**  
Extreme events  
Drainage network and storm water runoff potential
- e. Hurricanes**  
Wind  
Extreme rainfall  
Storm waves and surge potential
- f. Elements of Environmental Protection**  
Reefs, Wetlands, Watershed conditions, Forest/vegetation cover

## 6.4.3

### Box III

### BIOLOGICAL ENVIRONMENT

#### a. Flora

General type and dominant species  
 Densities and distributions  
 Habitat value  
 Historically important specimen  
 Watershed value  
 Introduced species  
 Rare and Endangered species (location, distribution and conditions)  
 Fire potential  
 Timber value  
 Specimen of scientific or aesthetic interest

#### b. Fauna

General types/dominant species  
 Densities and distribution  
 Habitat (general)  
 Migratory species  
 Exotic (introduced) species  
 Rare and endangered species  
 Commercially valued species

#### c. Terrestrial ecology

#### d. Marine/coastal Ecology

#### e. Riverine ecology

#### f. Nuisance species

#### g. Aesthetic appeal

#### h. Landscape vistas

## 6.4.4

### Box IV

### Human Environment

- a. Sphere of Influence
- b. Land Use – Site and Situation
- c. Zoning and Density Regulations
- d. Livelihoods
- e. Demographics
- f. Community Structure
- g. Proposed Developments
- h. Transportation and Traffic Patterns
- i. Settlement patterns and Social structure
- j. Water supply
- k. Energy supply
- l. Telecommunications
- m. Services – health, educational facilities, recreational facilities
- n. Archaeological heritage
- o. Cultural values
- p. Natural Hazard Vulnerability and History

## 6.5 PHYSICAL ENVIRONMENT

As indicated in the checklist (6.4.I - Box I), several aspects of the physical environment must be considered. The presentation of the information may follow the basic sequence below:

- i Climate, including the relevant hydrometeorological considerations for the project and climate change scenarios (within the scope of data available)
- ii Topography and soils
- iii Geology/ geomorphology
- iv Drainage
- v Natural hazard risk
- vi Ground water - hydrogeology
- vii Coastal morphology
- viii Air quality
- ix Noise
- x Landscape
- xi Aesthetic appeal

## 6.6 BIOLOGICAL ENVIRONMENT

The biological environment includes several inter-related components, which are based on the physical supporting structure. The components of the biological environment may be presented in the following sequence:

- i Habitats
- ii Flora
- iii Fauna
- iv Endangered species
- v Commercial species
- vi Endemic species
- vii Nuisance species
- viii Parks and Protected Areas



## **6.7 HUMAN ENVIRONMENT**

The human environment may also be described as the socio-economic or the built environment. Aspects of the human environment will be determined by the physical and biological environments, and the information may be presented according to the following sequence:

- i Population and Demographics
- ii Land and Livelihood /Employment
- iii Settlement patterns and Social structure
- iv Services – health, educational facilities, recreational facilities
- v Natural Hazard Vulnerability and History
- vi Recreational activity
- vii Archaeological heritage
- viii Cultural values

## **6.8 DESCRIPTION OF THE PROPOSED PROJECT**

This is a detailed statement of all the critical components, attributes or phases of the proposed development. This should also include pre-construction, and construction phase activities, through commissioning, to the operational phases of the development

## **6.9 LEGISLATIVE AND REGULATORY FRAMEWORK**

This section of the report should present information on the regulatory framework within which the potential development will have to operate. This should include:

- i Policy framework for conducting EIAs
- ii The EIA process
- iii Relevant statutory designations (nature reserves, parks and protected areas, heritage sites, listed buildings, monuments, protected species)
- iv Relevant national and regional legislation, regulations, and policy initiatives
- v Relevant international legislation

## 6.10 POTENTIAL IMPACTS

### 6.10.1 Prediction of Impacts

The objective of prediction is to identify the magnitude, significance, and other dimensions of potential change in and interaction with the environment given the project intervention. This should be an objective exercise utilizing scientific knowledge with a combination of informed professional judgment according to accepted procedure.

The following aspects should be covered in impact prediction:

Direction	Positive Or Negative
Duration	Long-, Medium- Or Short - Term, Episodic
Location	Direct or Indirect Project On Environment Environment On Project
Magnitude	Large Or Small – Major, Minor
Extent	Sphere Of Influence - Local, National, Regional

### 6.10.2 Impact Identification

- i Impact identification is a critical step in an EIA. An Impact Matrix should be used to document the impacts according to the criteria above.
- ii The impacts are selected, based on magnitude, significance, extent and special sensitivity, for further study.
  - Magnitude is measured on a selected scale and the impact ranked accordingly. Magnitude refers to the amount of change to be created by the project-environment interaction
  - Significance refers to the level of change especially as it relates to environmental quality objectives
  - Extent refers to the area to be affected.

- Quantification of impacts is a difficult technical aspect of an EIA. For some impacts, the theoretical basis for computing the magnitude does not exist. Such impacts may have to be addressed in a qualitative way.

### **6.10.3 National Hazard Impact**

Natural Hazard Impact is an essential consideration. The natural hazards within the project environment should have been identified in the physical baseline descriptions, and the impact assessment ought to consider vulnerability of the project site and situation to natural hazard impact. An assessment of the extent to which the project may exacerbate hazard vulnerability must also be assessed.

### **6.10.4 Cumulative Impacts**

In addition to the potential and site specific impacts, Cumulative Impacts should also be identified when appropriate. Cumulative Impacts are those impacts which will show an increase over time as a result of successive additions to the environmental changes. Cumulative Impacts are particularly important for projects which are large in size, scale and geographic range. Cumulative Impacts will also be important for areas which have limited development and in which the proposed project may make a significant change in character or resource base. Conversely, Cumulative Impacts will also be important for areas which are already extensively developed, or which have several other developments proposed, and in which the proposed project may add to or exacerbate existing environmental conditions.

### **6.10.5 Positive Impacts**

Positive impacts to be derived from the implementation of the project should also be described. These may include the following:

- i Improved land use options
- ii Improved character of a community
- iii Provision of jobs in the short term and/or long term
- iv Creation of opportunities for improved environmental awareness
- v Creation of opportunities for implementation of conservation methods
- vi Opportunities for international investment
- vii Improved standard of living

## **6.11 PUBLIC / COMMUNITY INVOLVEMENT AND REVIEW**

### **6.11.1 Civil Society**

Civil society, which includes citizens, community-based and non-governmental organizations (NGOs) within the sphere of influence of the project (project setting) should be given the opportunity to share information for the EIA study. This will facilitate obtaining views and perceptions of the proposed development, as well as the inclusion of local knowledge and expertise. Local anecdotal knowledge can sometimes help to facilitate differentiation between those impacts which are of major importance in the local context and those which are not.

Civil society should include but not necessarily be limited to:

- i Environment and Development NGOs
- ii Chambers of Commerce
- iii Service Clubs
- iv Citizens Associations

### **6.11.2 Information from NGOs**

Information obtained from NGOs and community groups can be of invaluable assistance in providing approaches to problem solving and resolving conflicts. This information obtained as part of the public consultations should be documented in the EIA report.

### **6.11.3 NEPA's Advice**

NEPA can advise on the various public consultation methods that may be employed depending on the nature of the project, the method of data collection, knowledge/expertise required, and the problem solving value.

### **6.11.4 Public Comments**

The public, apart from being directly involved in the actual EIA study, may be involved in the review of the EIA. Depending on the nature of the project, the EIA may be the subject of a public hearing or presentation, and/or posted on the website. The public is generally given thirty (30) days to send in written comments to NEPA, following public access to the document.

## **6.12 MITIGATION MEASURES**

It is recognised that it is seldom possible to eliminate an adverse environmental impact altogether, but it is often feasible to reduce its intensity. This reduction is referred to as mitigation. For each potential adverse impact the plan for its mitigation at each stage of the project should be documented and its cost assessed. This is an important consideration in the selection of the preferred alternative. In the case of beneficial impacts it should be demonstrated how these can be optimized.

## **6.13 CONSIDERATION OF ALTERNATIVES**

### **6.13.1 Documentation of Alternatives**

All the alternatives taken into account in developing the project should be documented. Documentation of the project alternatives illustrates that the developer may have considered other approaches to the project. These may include the consideration of other project sites, technology, densities and / or means of minimizing environmental damage.

### **6.13.2 Examples**

For example, if the project were to be sited elsewhere, the impacts associated should be reviewed and the associated mitigation action defined. Each alternative should be evaluated in respect of its potential environmental impact and capital and operating costs. The environmental losses and gains must be combined with the economic costs and benefits to give the full picture for each alternative.

### **6.13.3 Identification and Analysis of Alternatives**

Identification and Analysis of Alternatives or the Consideration of Alternatives often occurs early in the project planning stage, and should include the following as may be appropriate:

- i No action alternative
- ii Alternative locations
- iii Alternative scales of the project
- iv Alternative processes or equipment
- v Alternative site layouts
- vi Alternative operating conditions
- vii Alternative ways of dealing with potential impacts

## 6.14 ENVIRONMENTAL MANAGEMENT OF THE PROJECT

An outline for environmental management of the project should be stipulated and this will be finalized to include permit conditions following approval of the project by NEPA. The management plan should include the Environmental Quality Objectives related to the project and its environmental setting, the mitigation measures recommended in the EIA, the awareness and training for project staff, including construction and operations personnel, and an outline monitoring plan which will be used during the construction phase of the project.

## 6.15 ENVIRONMENTAL QUALITY OBJECTIVES (EQO)

Environmental Quality Objectives are determined by the physical, biological and social characteristics of the project site and setting as identified in the Baseline studies, by the nature of the project and potential impacts, and by the mitigation measures recommended. Quality Objectives should be applied to both the construction and operational phases of the development and they generally relate, though not exclusively, to:

- i Protection and Enhancement of environmental assets (habitat, coastal resources, vegetation cover, inter alia.)
- ii Slope Stability, Coastal Protection, Drainage optimization
- iii Environmental Health – Water Quality, Air Quality , Sanitation /Hygiene
- iv Disaster Risk Reduction
- v Human settlements
- vi Conservation of resources (water, energy)

## 6.16 TRAINING

Sensitisation training for staff is essential to meeting the environmental quality objectives. This process needs not to be exhaustive, but should be sufficient to ensure that all managers and line staff understand the obligations of the development under conditions of the environmental permit and the EQOs.

## **6.17 OUTLINE MONITORING PLAN**

### **6.17.1 Need for a Monitoring Plan**

The need for a Monitoring Plan should be stated in the EIA Report if it is the considered opinion of the consultants that it is required for a particular project. The requirement for the Monitoring Plan will be listed as a condition of the environmental permit issued by NEPA, if NEPA so requires.

### **6.17.2 Draft Proposal**

A draft of the proposed Monitoring Plan will include the mitigation measures recommended and will present procedures and reporting relationships. The programme should clearly state:

- i Institutional arrangements for carrying out the work parameters to be monitored
- ii Methods to be employed
- iii Standards or guidelines to be used
- iv Evaluation of the results
- v Schedule and duration of monitoring
  - Initiation of action necessary to limit adverse impacts evident from monitoring
- vi Format and frequency of reporting.

### **6.17.3 Parameters of the Monitoring Plan**

Parameters to be included in the Monitoring Plan will be dependent on the parameters analysed in the baseline data collection and the site specific conditions. Examples of parameters to be monitored include the following:

- i Riverine water quality (suspended solids, oil and grease, total and faecal coliforms, etc.)
- ii Coastal water quality (suspended solids, oil and grease, total and faecal coliforms, etc.)
- iii Vegetation (side-tipping of spoil, protected species, identified trees, etc.)

- iv Wildlife (turtle nesting beaches, sensitization of workers, etc.)
- v Air quality (respirable particulates, dust, opacity, noxious fumes, etc.)
- vi Noise (perimeter noise, etc.)
- vii Stack emissions (nitrous oxides, sulphur oxides, particulates, etc.)
- viii Solid Waste Management (number, type and placement of receptacles, etc.)
- ix Public Health (sanitary facilities, portable toilets, food waste, etc.)
- x Worker Health and Safety (safety gear, dust masks, hard hats, work boots, ear plugs, etc.)

The plan may need to be adjusted and finalized to take account of conditions stipulated in the environmental permit. The final Monitoring Plan must be approved by NEPA.

## 6.18 THE EIA TEAM

The team assembled to conduct the EIA should consist of qualified and experienced professionals from the range of disciplines required for the EIA, based on the critical aspects identified for the project.

## 6.18 LIST OF PROFESSIONALS

The following is a list of professionals that may be required depending on the environmental setting and the nature of the project:

- i Project Manager/Team Leader
- ii Geographer
- iii Geologist
- iv Hydrologist/Hydrogeologist
- v Hazard Management Specialist
- vi Chemist
- vii Marine Biologist
- viii Botanist/Floristic Surveyor
- ix Ornithologist
- x Herpetologist
- xi Lepidopterist



xii	Parks and Protected Areas Specialist
xiii	Urban/Regional Planner
xiv	Socio-economist
xv	Demographer
xvi	Impact Assessment Specialist

## 6.19 THE EIA REPORT

### 6.19.1 Documentation

The EIA should be documented by a written report, supported by references, photographs, maps, plans and data tables as appropriate.

### 6.19.2 Content

The report should contain an introduction explaining the need for, and context of the project. This document should have the following basic aspects included in the Table of Contents, unless specified otherwise in the Terms of Reference.

i	Executive Summary
ii	Policy, Legal and Administrative Framework
iii	Description of the Existing Environment
iv	Description of the Proposed Project in detail
v	Identification and Assessment of Potential Environmental Impacts
	<ul style="list-style-type: none"> <li>• Physical</li> <li>• Natural Hazard Risk</li> <li>• Biological</li> <li>• Human/Social</li> </ul>
vi	Cumulative Impacts
vii	Positive Impacts
viii	Public Involvement
ix	Recommended Mitigation Measures
x	Identification and Analysis of Alternatives
xi	Environmental Management of the Project
	<ul style="list-style-type: none"> <li>• Environmental Quality Objectives</li> <li>• Training</li> <li>• Draft Outline Monitoring Programme</li> </ul>

xii List of References

xiii Appendices including:

- Reference documents
- Photographs/ maps
- Data Tables
- Terms of Reference
- Composition of the consulting team
- Notes of Public Consultation sessions

# CHAPTER 7

## ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REVIEW

### 7.0 EIA REPORT SUBMITTED FOR REVIEW

The Final EIA report is submitted to NEPA for review. The process of review of EIA reports is primarily the responsibility of the National Environment and Planning Agency (NEPA). However stakeholder participation is essential in the sustainable development process, and relevant agencies of government and other institutions with the requisite knowledge, expertise and responsibility form part of the EIA and Permit Review process through the Technical Review Committee.

### 7.1 INTERNAL REVIEW COMMITTEE

An Internal Review committee (IRC) comprising the relevant technical staff from within NEPA reviews the report and solicits responses from the applicant where there may be queries. The IRC then prepares the project for presentation to the Technical Review Committee, which comprises stakeholder agencies external to NEPA.

### 7.2 STAKEHOLDERS INVOLVED

Some of the stakeholders frequently involved in the process include:

- i Water Resources Authority (WRA)
- ii Environmental Health Unit (EHU)
- iii Ministry of Health
- iv Mines and Geology Division
- v Jamaica Bauxite Institute (JBI)
- vi National Solid Waste Management Authority (NSWMA)
- vii Institute of Jamaica
- viii Office of Disaster Preparedness and Emergency Management (ODPEM)
- ix Jamaica Natural Heritage Trust (JNHT)
- x National Water Commission (NWC)
- xi National Irrigation Commission (NIC)
- xii Fisheries Division
- xiii National Works Agency (NWA)
- xiv National Land Agency (NLA)
- xv University of the West Indies (UWI)
- xvi Parish Councils
- xvii Select Non- Governmental Organizations

### **7.3 THE REVIEW**

NEPA is obliged to undertake a thorough review of EIA reports and the stakeholder agencies will focus at a minimum on the areas for which they have legal responsibility or specific expertise. Agencies selected to review specific EIAs will be dependent on the nature of the project. During the Review process all reviewers are required to direct queries to the Applications Secretariat Branch, NEPA.

### **7.4 TIMELINE**

In an effort to adhere to the ninety-day (90) timeline for processing applications NEPA requests that the reviewing agencies submit their responses within thirty-days (30) of receiving the EIA report.

### **7.5 PRESENTATION TO NRCA BOARD**

The Findings of the Technical Committee and the Internal Review Committee are then compiled and the project presented to the NRCA Board for consideration and approval.

# CHAPTER 8

## POST PERMIT REQUIREMENTS

### 8.0 POST PERMIT REQUIREMENTS

Depending on the nature and scope of the project, NEPA may request particular actions on the part of the developer, after the permit is issued. These actions are usually stipulated in the permit and if not followed through, the developer could be found in breach of the permit conditions. Examples of types of actions that may be required are the preparation of any of the following:

- i Environmental Management and training
- ii Monitoring Programme
- iii Emergency Response Plan

### 8.1 ENVIRONMENTAL MANAGEMENT AND TRAINING

This section should document how the environment will be managed during the implementation of the project both construction and operational phases. The training programme for employees of the facility should be outlined. This section should identify any institutional needs for implementing the recommendations of the EIA.

### 8.2 MONITORING PROGRAMME

A detailed environmental monitoring programme/plan should be described. The reasons for and the costs associated with the monitoring activities should be covered. It should be noted that some details presented may change depending on the final designs after the EIA preparation and review. These changes must be submitted to and approved by the NRCA.

The monitoring programme should clearly state the:

- i institutional arrangements for carrying out the work
- ii parameters to be monitored
- iii methods to be employed
- iv standards or guidelines to be used
- v evaluation of the results
- vi schedule and duration of monitoring
- vii initiation of action necessary to limit adverse impacts
- viii disclosed by monitoring

- ix format and frequency of reporting

### 8.3 EMERGENCY RESPONSE PLAN

An Emergency Response Plan is a procedures manual to deal with both internal and external emergencies such as:

- i fires
- ii accidents
- iii earthquakes
- iv hurricanes
- v floods
- vi civil unrest
- vii handling of hazardous materials
- viii spills contingency
- ix malfunctioning equipment

Other types of post permit requirements could include:

- i Wildlife Management Plan
- ii Nursery Manual and Protocol

## CHAPTER 9

### STRATEGIC ENVIRONMENTAL ASSESSMENTS

#### 9.0 DEFINITION OF STRATEGIC ENVIRONMENTAL ASSESSMENTS (SEA)

A Strategic Environmental Assessment (SEA) is defined as “the formalized, systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or programme and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making” (Therivel et al, 1992).

#### 9.1 POLICY, PLANS AND PROGRAMMES

A policy may be defined as an inspiration and guidance for action, a plan as a set of coordinated and timed objectives for the implementation of a policy, and a programme as a set of projects in a particular area (Wood, 1991).

#### 9.2 RELATIONSHIP BETWEEN SEA AND EIA

A SEA may be described as an EIA of policies, plans and programmes, where impacts are predicted at a strategic level. Cumulative Impacts which are applicable to EIAs are certainly of increased importance in the SEA. In fact individual project EIAs will not adequately consider the cumulative impacts caused by several projects being proposed by developers, independent or otherwise.

#### 9.3 WHEN TO CARRYOUT SEA'S

A SEA should be carried out early in the decision-making process and should encompass all of the projects of a certain type or within a certain area. The SEA may ensure that alternatives are adequately assessed, that cumulative impacts are considered, that the public is fully consulted and that decisions concerning individual projects are made in a proactive way rather than in a reactive way (Glasson et al, 1994).

#### 9.4 TECHNICAL ISSUES

On the technical side, the many future developments planned over a large area can result in analytical complexity. This is because the information about proposed developments and projected future environmental conditions may be limited and difficult to assess.

## 9.5 SEA's CONDUCTED IN JAMAICA

Three SEAs have been conducted in Jamaica in recent years, and serve to show the following:

- i the emerging importance of the SEA
- ii the contribution of the SEA to informed decision-making
- iii the benefits of the SEA to the developer
- iv the early dissemination of information to the public on proposed developments

These three SEAs have been for three distinctly different types of projects, in three different geographical areas and each with a unique set of issues. These SEAs are:

- i Port Royal Heritage Tourism Project (The proposed development of a town in a renowned heritage area, with themed sections, and associated development for the cruise ship and tourism market).
- ii Highway 2000 (The proposed development of a cross nation, toll road covering over 240 km and traversing different types of terrain)
- iii Rose Hall Developments Ltd. (The proposed development, based on government mandate, of prime north coast real estate, for the tourism market, and to include hotels, golf courses, condominiums and conference center.)

## 9.6 SEA POLICY

Recognizing the emerging importance and application of the SEA, The Cabinet Office with the then Ministry of Land and Environment (supported by the ENACT Programme and NEPA) have produced a Draft Manual on conducting Strategic Environmental Assessments. a SEA policy which was also accepted by Cabinet in 2005. Training in SEA began in August 2006 and will end in December 2006. This training is geared toward enabling offices of the Government of Jamaica to undertake SEAs of proposed and existing policies, plans and programmes.



# CHAPTER 10

## PUBLIC PRESENTATIONS

### 10.0 GENERAL GUIDELINES

#### 10.0.1 Introduction

- i There are usually two forms of public involvement in the Environmental Impact Assessment (EIA) process. The first is direct involvement of the affected public or community in public consultations during the EIA study. These consultations allow the developer to provide information to the public about the project and to determine what issues the public wishes to see addressed. The extent and results of these consultations are included in the documented EIA report.
- ii The second level of involvement takes place after the EIA report and addendum, if any, have been prepared after the applicant has provided the information needed for adequate review by NEPA and the public.
- iii Public involvement in the review process is in keeping with Principle 7 of the United Nations Environment Programme (UNEP) decision published as Goals and Principles of Environmental Impact Assessment [Decision 14/25 of the Governing Council of UNEP, of 17, June, 1987]

#### 10.0.2 Purpose

These guidelines are prepared for the use of the developer/project proponent the consultants involved in conducting the EIA study, those who prepared the EIA report and the public.

### 10.1 SPECIFIC GUIDELINES FOR PUBLIC PRESENTATIONS

#### 10.1.1 Requirements

When a decision is taken by NEPA that a public presentation is required, the developer/consultant will be notified by NEPA. [See Appendix I] The decision to request a public presentation will be taken after the application is screened by NEPA and will form part of the Terms of Reference (ToR).

On receipt of the request, arrangements must be made for the public presentation in consultation with NEPA in respect of date, time, venue and participants.

### **10.1.2 Public Notification**

The public must be notified at least three weeks before the date of the public presentation. The developer/consultants must seek to ensure that in addition to specific invitation letters, at least three (3) notices are placed in the most widely circulated newspapers advertising the event. The notice shall also be forwarded to NEPA for posting on the website. To ensure that the notice is distributed as widely as possible, other methods of notification such as community notice board, flyers, town criers etc. shall be utilized as appropriate. In addition, specific notice to relevant local NGOs and community groups should be made by the developer/consultants.

The notice should indicate:

- i that the EIA has been submitted to NEPA;
- ii the purpose of the meeting;
- iii how to access the EIA report for review
- iv the date, time and venue of the public presentation.

The public presentation should be conducted no less than 3 weeks after the notice has been published by the applicant. A typical notice is at Appendix 3.

## **10.2 RESPONSIBILITY OF DEVELOPER/CONSULTANT TEAM**

### **10.2.1 Distribution of EIA Report**

The consultant/developer is responsible for distribution of copies of the EIA report to make them available to the public at least three weeks before the public presentation. A summary of the project components and the findings of the EIA in non-technical language should also be prepared for distribution in advance of the public presentation. Copies should be placed in the Local Parish Library and the Parish Council Office as well as at the nearest NEPA Regional Office and other community locations.

### **10.2.2 Documentation of Proceedings**

The consultant/developer and NEPA are also responsible for making the arrangements to document the proceedings of the meeting. A permanent record of the meeting is required and one can consider tape recording from which a written record can be made within two weeks of the presentation.

## **10.3 CONDUCT OF THE MEETING**

### **10.3.1 The Chairperson**

With respect to the conduct of the meeting, the chairperson should be independently selected so as to ensure his/her neutrality. NEPA will advise on the selection of a chairperson. NEPA staff may on occasion be responsible to chair the meeting. The role and responsibilities of the chairperson are outlined at Appendix 5.

### **10.3.2 Presentation of Main Findings**

The technical presentation by the project proponent/consultant should be simple, concise and comprehensive. The main findings of the EIA including adverse and beneficial impacts identified and analyzed should be presented.

### **10.3.3 Presentation of Mitigation Measures and Costs**

Mitigation measures and their associated costs should be presented. The presentation should inform the public about how to obtain access to monitoring information during the construction and operational phases of the project, bearing in mind that the public and non-governmental groups are expected to be involved in post-approval monitoring. Graphic and pictorial documentation should support the technical presentation.

### **10.3.4 Timing**

Presenters are advised to keep the technical presentation simple and within a time limit of 20-30 minutes depending on the complexity of the project and to allow 30-60 minutes for questions.

### **10.3.5 Verbatim Report of Public Presentation**

The project proponent/consultant will submit to NEPA a copy of the verbatim report of the public presentation within seven (7) days of the date of the meeting. NEPA will also make arrangements to document the concerns of the audience for its own records.

### **10.3.6 Written Comments from Public**

It should be noted that the public will be given a period of thirty (30) days after the meeting to send in written comments.

### **10.3.7 Agenda**

A typical agenda for a meeting is given in Appendix 2

## **10.4 CONTACT INFORMATION**

For further information please contact:

National Planning and Environmental Agency  
10 Caledonia Avenue  
Kingston 5  
Tel: (876) 754-7540  
Fax: (876) 754-7595  
Email: [ceo@nepa.gov.jm](mailto:ceo@nepa.gov.jm)  
Website: [www.nepa.gov.org](http://www.nepa.gov.org)

## **APPENDICES**

### **Appendix 1**

**Sample Public Notice (#1)** - Notice of Intention for Environmental Impact Assessment Study Comment Invited

### **Appendix 2**

**Sample Public Notice (#2)** - Notice of Completion of Environmental Impact Assessment Study Public Comment Invited.

### **Appendix 3**

Notification of Public Meeting

### **Appendix 4**

Agenda - Public Presentation

### **Appendix 5**

Role and Responsibilities of the Chairperson

### **References**

## Appendix I

### Sample Public Notice (#1)

#### Notice of Intention for Environmental Impact Assessment Study Public Comment Invited

*- Insert Name of Development, Parish -*

In accordance with the Natural Resources Conservation (Permits and Licences) Regulations of the Natural Resources Conservation Authority (NRCA) Act 1991, the NRCA has exercised its right to require an environmental impact assessment (EIA) of the above-captioned development proposal before a decision to issue a Permit or Licence is made.

This development is proposed by *-insert name of developer -* on *- insert details of parcel of land -* located *- insert details of the project location -*, as shown in the map below. The proposal entails *-insert details of development. Insert name of developer -* has retained *-insert name of consultant -* to assist them with the conducting of the EIA study. Before the EIA can be started, appropriate Terms of Reference for the study need to be agreed upon by the applicant and NEPA.

These draft ToRs are available for public inspection at the following locations.

- *Insert names, address and opening hours of public library closest to the project site;*
- *Insert the name of the consultant or developer, their address and opening hours; and*
- NEPA Documentation Centre, 11 Caledonia Ave., Kingston 5, open 9am - 4pm.
- NEPA Web Site

If you wish to comment on the draft ToRs for this project, please do so within **7 days** of the date of the publication of this notice. Comments should be addressed to:

Manager  
Applications Secretariat Branch  
*Insert name of project*  
National Environment and Planning Agency  
10 Caledonia Ave.  
Kingston 5  
Tele: (816) 754-7547 0  
e-mail: [applications@nepa.gov.jm](mailto:applications@nepa.gov.jm)

If you do not wish to comment on the draft terms of reference, but wish to stay apprised of project developments, please contact *-insert name of developer-* at the above-noted address.

(Add map of proposed development site here)

**Date of Notice:** \_\_\_\_\_

## Appendix 2

### Sample Public Notice (#2)

#### Notice of Completion of Environmental Impact Assessment Study Public Comment Invited

– – *Insert Name of Development Parish* –

In accordance with the Natural Resources Conservation (Permits and Licences) Regulations of the Natural Resources Conservation Authority (NRCA) Act 1991, the NRCA has exercised its right to require an environmental impact assessment (EIA) of the above-captioned development proposal before a decision to issue a Permit or Licence is made.

This development is proposed by *–insert name of developer – on insert details of parcel of land – located – insert details of the project location –, as shown in the map below. The proposal entails – insert details of development.*

- *Insert name of developer* – has retained *– insert name of consultant –* to assist them with the conducting of the EIA study. A final EIA report of this proposed development has now been completed. A review of this study will be the basis upon which a decision is made by the NRCA to grant a permit and/or licence for the development or not. Accordingly, the EIA report needs to be reviewed by the relevant government review agencies and interested members of the public. The report is available for public inspections at the following locations:

- *Insert name, address and opening hours of the public library closest to the project site;*
- *Insert the name of the consultant or developer, their address and opening hours; and*
- NEPA Documentation Centre, 11 Caledonia Ave., Kingston 5, open 9-- 4

If you wish to comment on the EIA report please do so within 3 weeks of the publication of this notice and address them to:

Manager  
Applications Secretariat Branch  
*Insert name of project*  
National Environment and Planning Agency  
10 Caledonia Ave.  
Kingston 5  
Tele: (816) 754-7547 – 40  
e-mail: [applications@nepa.gov.jm](mailto:applications@nepa.gov.jm)

*(Insert map of proposed development site here)*

Date of Notice: \_\_\_\_\_

## Appendix 3

### NOTIFICATION OF PUBLIC MEETING

THERE WILL BE A PUBLIC PRESENTATION ON THE ENVIRONMENT IMPACT  
ASSESSMENT REPORT

OF:

VENUE:

DATE:

TIME:

THE PUBLIC IS INVITED TO PARTICIPATE IN THE PRESENTATION BY WAY  
OF ASKING QUESTIONS RELATING TO THE PROPOSED PROJECT.

A COPY OF THE ENVIRONMENTAL IMPACT ASSESSMENT REORT MAY BE  
CONSULTED AT THE

\_\_\_\_\_ PARISH LIBRARY  
\_\_\_\_\_ PRAISH COUNCIL OFFICE

\_\_\_\_\_ For further information contact:



## **Appendix 4**

### ***AGENDA - PUBLIC PRESENTATION***

1. WELCOME AND INTRODUCTION
2. PRESENTATION OF EIA FINDINGS AND MEASURES TO MINIMIZE IMPACTS
3. QUESTION AND ANSWER SESSION
4. CLOSING REMARKS

## Appendix 5

### ROLE AND RESPONSIBILITIES OF THE CHAIRPERSON

The chairperson has the main role of guiding the conduct of the meeting and seeing to it that the concerns of the public are adequately aired and addressed by the consultants/ proponent.

The responsibilities of the chairperson include explaining the NEPA approval process, that is, the steps involved and the role of the NEPA at these public presentations. In other words, the chairperson should explain the context within which the meeting is taking place.

The chairperson should ensure that adequate time is allowed for questions and answers, and must understand clearly and communicate the purpose of the meeting to the audience. The chairperson is responsible for introducing the presenters.

The chairperson should contribute to but not monopolize the meeting.

## Appendix 6

### LIST OF REFERENCES

1. 1. Y. J. Ahmad and G. K. Sammy: *Guidelines to Environmental Impact Assessment in Developing Countries* UNEP Regional Seas Reports and Studies No. 85, UNEP, 1987.
2. Conrad Douglas and Associates: Natural Resources Conservation Authority *Guidelines for the Preparation of an Environmental Impact Assessment* - Draft, September 29, 1993.
3. Davis-Mattis, Laleta. Natural Environmental and Planning Agency *Jamaica's Commitment to the Conservation and Management of Natural Resources ...Ten Years in Retrospect* March 2002
4. World Bank Technical Paper Number 139: *Environmental Assessment Sourcebook, Vols. I - III*, Environment Department, World Bank, Washington D.C., December 1991.
5. Municipal Engineers Association of Ontario: *Class Environmental Assessment for Municipal Road Projects*, Chapter 5 - Public Consultation June 1993.
6. *Goals and Principles of Environmental Impact Assessments* [Adopted by decision 14/25, of the Governing Council of UNEP, of 17 June, 1987] Chapter IV.
7. Jones Williams, Margaret. *Environmental Impact Assessment EM614*. M.Sc. Natural Resources Management, UWI Mona 2004.
8. Glasson: John, Riki Therivel and Andrew Chadwick *Introduction to Environmental Impact Assessment: The Natural and Built Environment*- Series 1, (1994)
9. Caribbean Development Bank *NHIA-EIA Sourcebook* (in progress)