

CHAPTER 2: ENVIRONMENTAL REQUIREMENTS

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The legislation that is related to the prevention, abatement, control of pollution and enhancement of the environment in Malaysia is the **Environmental Quality Act 1974 (Amendment) 2007**. To date, 38 sets of Regulations and Orders have been introduced and enforced. Under this Act, an Environmental Impact Assessment (EIA) is required for activities prescribed under the **Environmental Quality (Prescribed Activities)(Environmental Impact Assessment) (Amendment) Order 2000**. Those activities that are not subject to the mandatory EIA requirement are nevertheless subject to various other regulations under the Act. The standard regulations call for project siting evaluation, pollution control, monitoring and self regulation using the audit process.

Apart from compliance with the Environmental Quality Act (EQA) 1974 (Act 127) and other related environmental legislations, the following Acts are also applicable based on its relevancy to the planning, design, construction, equipping and commissioning of any project.

- a) National Land Code (Act 56 of 1965)
- b) Town and Country Planning Act 1976, (Act 172)
- c) Street, Drainage and Building Act, 1974: Act 133 and Amendment, 1978
- d) Protection of Wildlife Act, 1972 (Act 76)
- e) Forestry Act 1984 (Act 313)
- f) Land Conservation Act 1960 (Act 385)
- g) Occupational Safety and Health Act 1994 (Act 514)
- h) Solid Waste and Public Cleansing Management Act 2007 (Act 672)
- i) Federal Territory (Planning) Act 1982 (Act 267)
- j) Workers Minimum Amenities Act 1990 (Act 446)
- k) Local Government Act 1976 (Act 171)

2.1 Planning/Design Stage

Environmental requirement during planning or design stage is clear whereby if the said project has been classified as a “prescribed activity” according to the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 **and Section 34A of the Environmental Quality (Prescribed Activities)(Environmental Impact Assessment) (Amendment) Order 2000**, an Environmental Impact Assessment (EIA) study need to be carried out and submitted to Department of Environment for approval prior to project implementation.

Under the Act, there are a total of **nineteen (19) categories** of prescribed activities which include agriculture, airport, drainage and irrigation, land reclamation, fisheries, forestry, housing, industry, railways, transportation, resort and recreation development, waste treatment and disposal, and water supply projects. Additionally, a Detailed Environmental Impact Assessment (DEIA) study is required for thirteen (13) different types of projects which include steel mill, pulp and paper mill, cement plant, coal-fired power plant, dams (hydroelectric and water supply), coastal land reclamation, incinerators (scheduled wastes and solid wastes, solid wastes disposal sites, projects

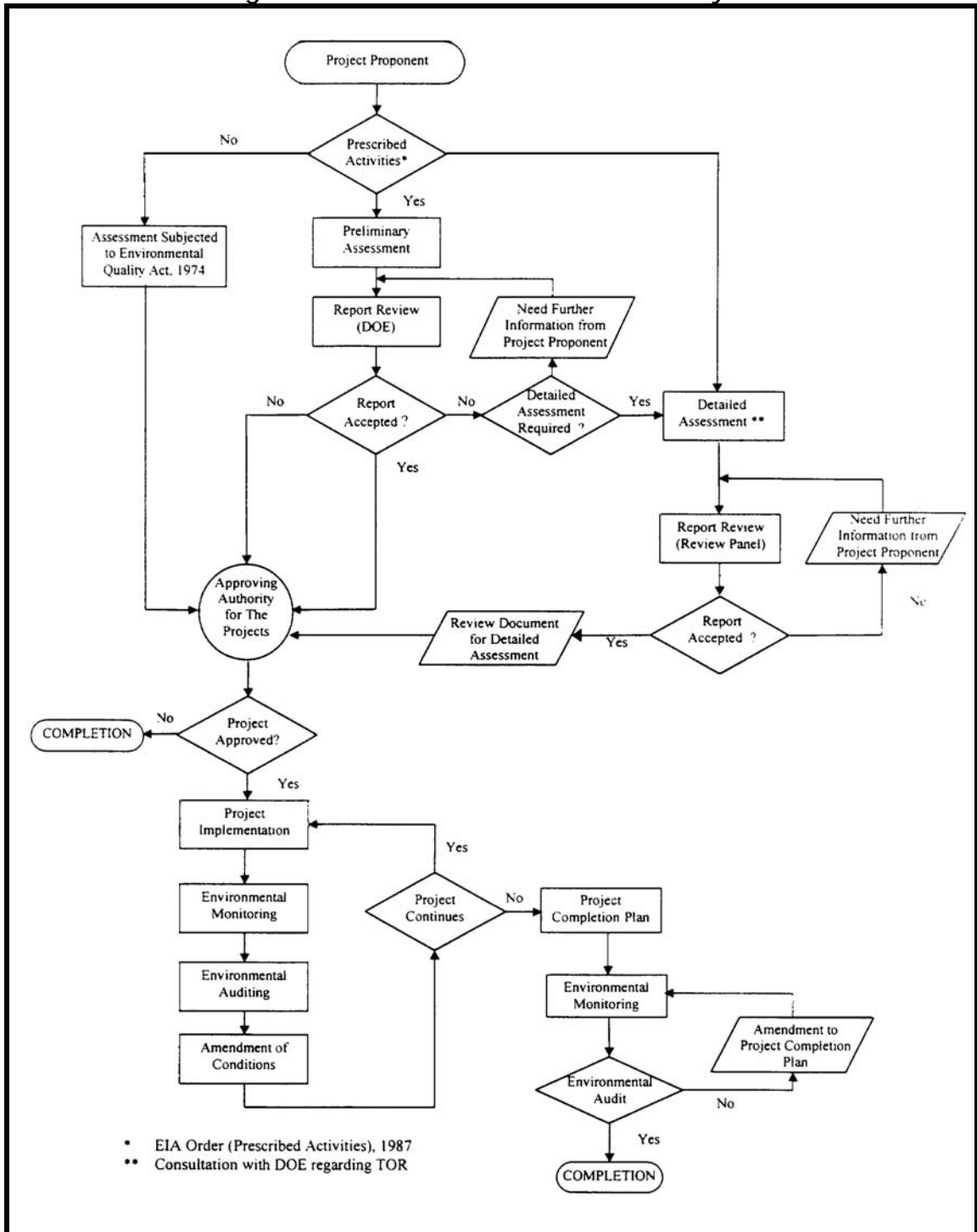
involving land clearance where more than 50% of the area has slope $>25^\circ$) and logging (>500 hectares). It is to be noted that for projects in **Sabah and Sarawak**, specific local legislations pertaining to EIA requirements need to be adhered to.

Apart from the legislative requirement, EIA may be prepared taking into consideration the sensitivity of the project in terms of its location, site conditions and magnitude of impacts. In some cases, preparation of EIA study is required by the local authorities or form part of the contractual requirement of a project.

Findings from the study are intended to provide input in the planning of the Project, particularly in minimizing environmental impacts during the construction and operational stages. An EIA is considered as a **planning tool** to assist the Project Initiator in anticipating impacts of the development, both beneficial and adverse, with an aim to maximize the beneficial impacts and minimize the adverse impacts on the environment.

For better understanding of the EIA process and procedures, an EIA flowchart is shown in Figure 1.

Figure 1 : Flowchart For EIA Process in Malaysia



Source : Department of Environment, 1995

2.1 Implementation/Construction Stage

In order to monitor that the project complies with the environmental legislation and general requirement of the Client's needs, an **Environmental Management Plan (EMP)** is prepared as detailed herein. The EMP has to be prepared in accordance with the format recommended by the Department of Environment (DOE) and is expected to be a framework of management programs which facilitates effective mitigation against on-site impacts to the acceptable limits as stipulated by the DoE.

The plan outlines the responsibilities of the parties involved in the project, the environmental requirement for the project and specifies mitigation and environmental surveillance measures that are required to be adopted for the implementation of the project.

The implementation of the EMP shall ensure that the execution of the Project causes **minimal adverse impacts** on the surrounding environment and its natural resources. The EMP is not intended as a rigid planning document but rather an active document that shall be revised and improved on a regular basis throughout the implementation of the project.

Integral to EMP is the establishment of a monitoring program that serves as a quantitative feedback mechanism on the effectiveness of the implemented best management practices. Essentially, the **monitoring program** is a set of procedures targeted towards periodical measurement of environmental indicators that provides a platform to evaluate environmental performance through comparisons against baseline and compliance levels. Selection of environmental components to monitor, their locations, parameters and frequency of monitoring are governed by the EIA approval conditions or by a Registered Environmental Consultant (if no EIA was carried out for the project). As a norm, monitoring is centered on the issues of water, noise and air qualities likely to be impacted upon by the Project.

The **auditing** procedure and schedule shall be detailed out in the EMP. The audit shall focus on the implementation of the EMP and/or other environmental management elements. The environmental auditor shall have the necessary expertise and experience to execute the tasks diligently and professionally in accordance with the requirements of JKR EMS: MS ISO 14001 and shall undertake the following tasks :-

- a. carry out environmental compliance audits quarterly and closure audit on completion of the project;
- b. evaluate monitoring data for water, air and noise qualities;
- c. verify implementation of corrective and preventive action findings on adequacy of compliance to the EMP and/or JKR EMS ISO 14001;
- d. prepare a comprehensive environmental auditing report in compliance to elements as stated in the EMP and/or JKR EMS ISO 14001;

2.3 Operational/Post Construction Stage

Upon submission and acceptance of the closing audit at the end of the construction period, monitoring of operational activities in compliance to the necessary laws and regulations must still be continued in the **post construction** stage in order to ensure that the operation stage of the project does not cause any environmental damage. The impact of generated wastewater has been deemed to be the more significant residual impact that requires further monitoring. The quality of any wastewater discharged must comply with the limits as stipulated by the Environmental Quality Sewage and Industrial Effluent Regulations (1979).

2.4 Applicable Guidelines

The use of the **relevant Guidelines** in the planning/design stage of the project is deemed necessary in order to ensure the project activities do not violate any applicable laws and regulations. The guidelines need to be used in respect to the project site specific conditions.

The General guidelines applicable are as follows :-

Area to be developed	Applicable Guidelines
General Sites	<ul style="list-style-type: none"> Guidelines for the Environmental Impact Assessment of Highway/Road Projects, JKR Malaysia Environmental Impact Assessment Guidelines for Housing and New Township Development Project, DOE 2003 Urban Stormwater Management manual for Malaysia (Manual Saliran Mesra Alam Malaysia), JPS 2000 Guidelines for Prevention and Control of Soil Erosion and Siltation in Malaysia, DOE 1996
Hillslope and Sensitive Sites	<ul style="list-style-type: none"> Cabinet Committee Guidelines on Hillslope development; JPBD Guidelines of Development of Hilly Areas, JPBD 1997; JKR Manual on Slope Maintenance
Coastal Sites	<ul style="list-style-type: none"> JPS Guidelines 1/97 Erosion Control for Coastal Development Area, 1997; Planning Standards for Coastal Areas, JPBD Planning Standards for the Physical Development of Islands, JPBD

2.5 EXCLUSIONS

This document is **not** to be used to cost for environmental protection and enhancement for projects that are subjected to Detailed Environmental Impact Assessment Studies, marine related projects such as jetties, marinas, coastal protection structures or any structure that extends out into the sea and projects to be developed at sites identified as environmentally sensitive areas (ESAs) such as wetlands, marine parks and national parks.