



Module 1.4

EMPs Monitoring Reports

Department of Environment, Malaysia



Objectives of the module

- To explain the legal basis for monitoring exercise
- To brief on the concept and purpose of EMPs
- To brief on the post-EIA monitoring process
- To brief on how the EMP, Monitoring Reports and other reports are used as auditable materials in Environmental Audit



Outline

- Legal Requirement
- Introduction to environmental management plan and its objectives
- Introduction to monitoring in EIA, reasons for monitoring, types of monitoring
- What auditor should look for and recommend



Legal Requirement for monitoring

Section 34A(7)... 'If the Director General approves the report, the person carrying out the prescribed activity, in the course of carrying out such activity, shall provide sufficient proof that the conditions attached to the report (if any) are being complied with and that the proposed measures to be taken to prevent, reduce or control the adverse impact on the environment are being incorporated into the design, construction and operation of the prescribed activity'.



GUIDANCE DOCUMENT FOR PREPARATION AND SUBMISSION OF ENVIRONMENTAL MANAGEMENT PLAN (EMP)



Environmental Management Plan (EMP)

INTRODUCTION

- Integral part of EIA
- Project specific
- Commitment of the project proponent
- Implementation of mitigation measures proposed & specific for project
- Implementation of approval conditions
- EMP is approved by DOE



Environmental Management Plan (EMP)

- Translates the [EIA approval conditions](#) (COA) into action.
- Neither a report of another study nor a document which is descriptive in character.
- Actions plan for compliant with the COA.
- A concrete plan of action which is explicit, illustrative, action-oriented, time-bound and definitive.
- A living document which needs to evolve when there exists certain circumstances which demand changes to be made.

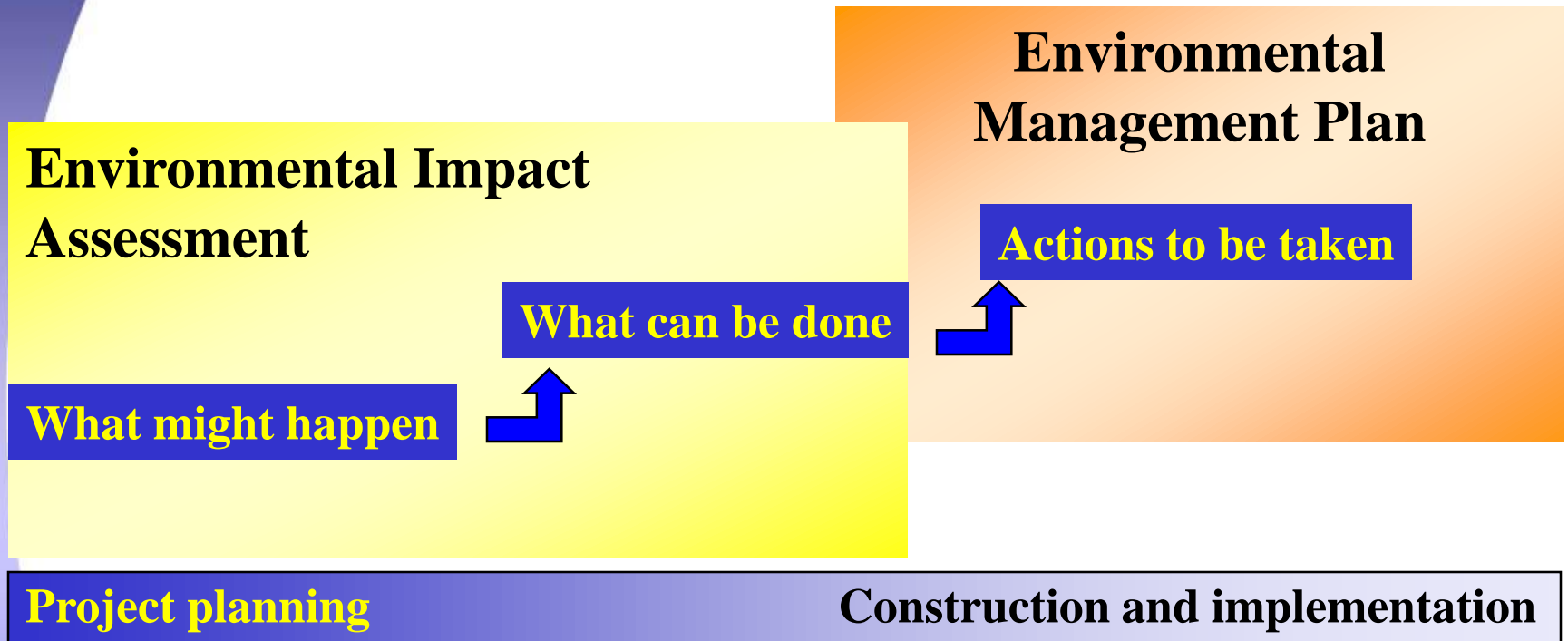


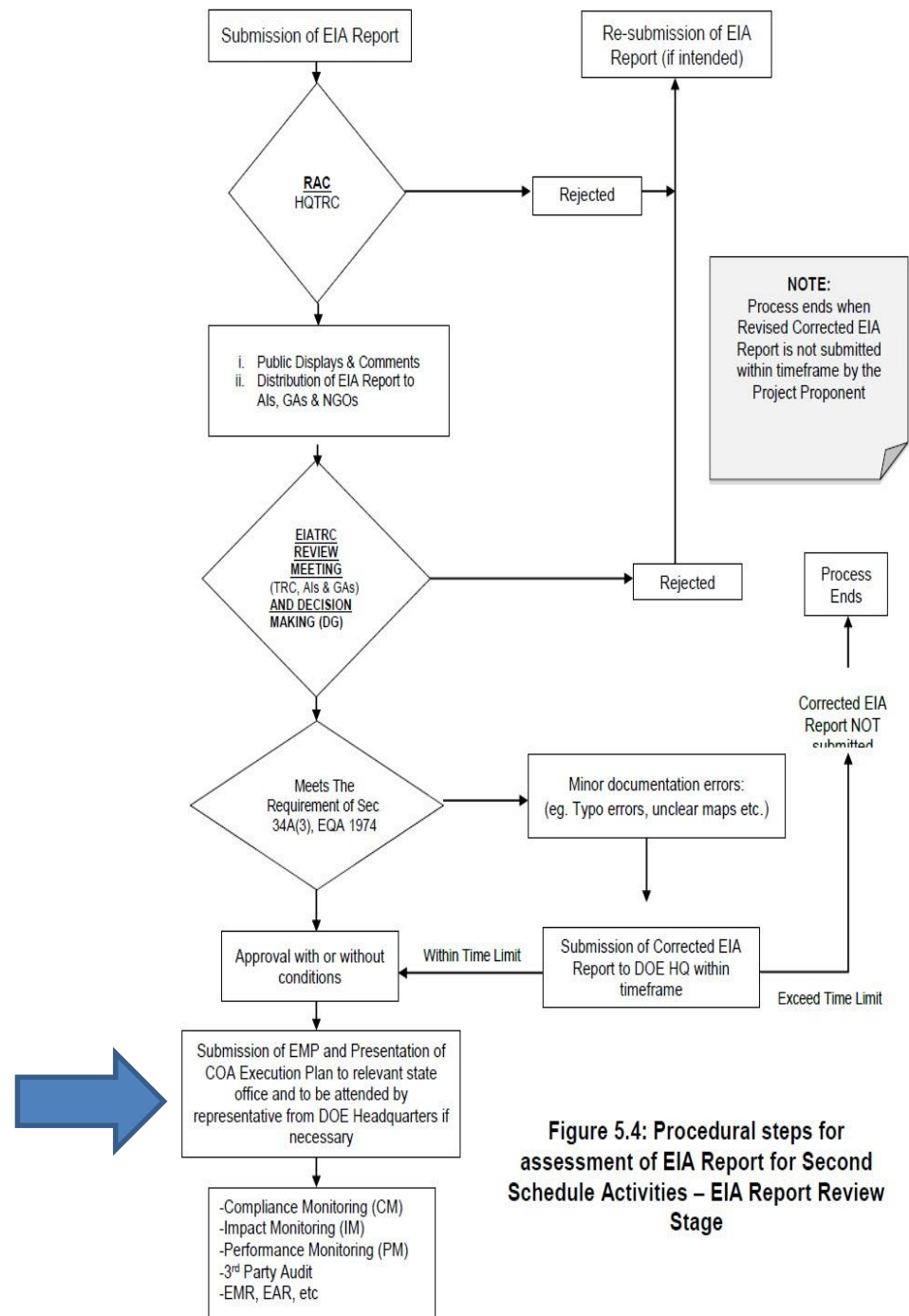
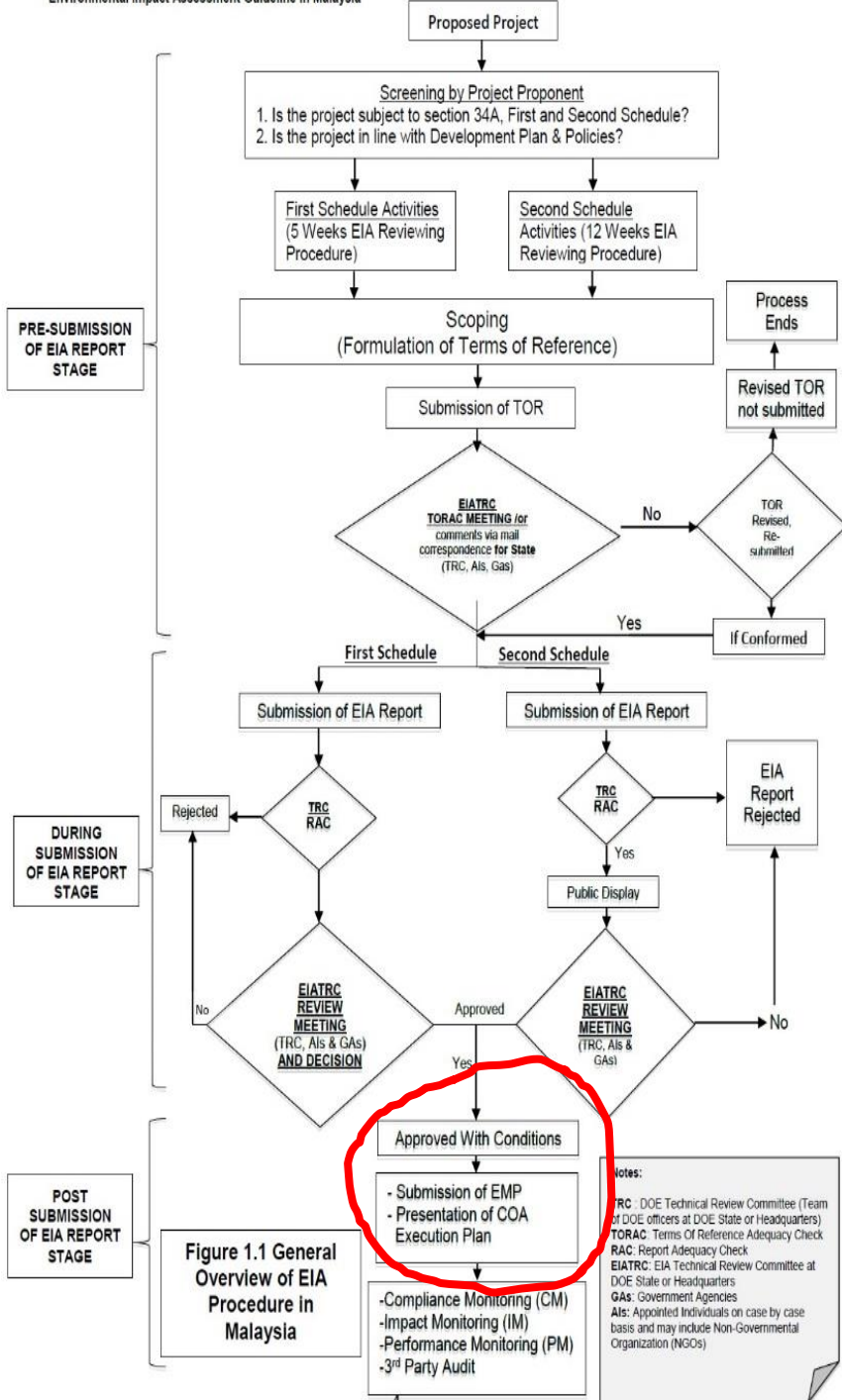
Environmental Management Plan (EMP)

- Summary of the potential significance impacts of the proposal
- Description of the recommended mitigation measures
- Allocation of resources and responsibilities for plan implementation
- Schedule of the actions to be taken;
- Compliance and impact monitoring
- Environmental auditing; and
- Declaration of compliance with conditions of approval



EMP - illustrated







Submission of EMP

- Although in this EIA Guideline the EMP is discussed in the post submission stage of the EIA Report, the **Project Proponent is recommended to prepare the EMP at the same time as the EIA Report.** If this option is taken, both the EIA Report and the EMP can be submitted to the DOE at the same time. If deemed necessary, **the EMP can later be updated to incorporate the requirements of the COAs.**



EMP - Main objectives

- provide support to the planning of environmental management of the project
- guidance for day to day environmental management of the project
- reporting plans and actions
- review of current and past practices to assess effectiveness
- communicate the environmental policy and management practices used on the project to all relevant parties



EMP - 'living document'

- should be improved and adapted throughout the life of the project to reflect changing conditions
- be subjected to periodic review to ensure their continued relevance and validity
- Project Proponent must update the Document
- For audit purpose, auditor need to review the updated EMP (and previous EMP if necessary)



FORMAT OF EMP -

- **Chapter 1: Introduction**

- a. Project layout as approved in the Development Order by Local Authority.
- b. Project implementation schedule.
- c. Name of the EMP preparer and his consulting firm.

- **Chapter 2: Policy**

- a. Company's corporate policy statement on environmental management and protection.
- b. Commitment by the top management on the mainstreaming of environmental agenda and self regulation in the development project and on ensuring continuous compliance with the environmental regulatory requirements.



FORMAT OF EMP

- **Chapter 3: Organizational Structure**
 - a. Organization chart of the company's top management with responsibilities on environmental management and protection (provide names, positions, mobile phone contact numbers and e-mail addresses).
 - b. Name, mobile phone contact number and e-mail address of environmental manager, environmental officer (EO), engineering consultant, contractor, site supervisor and competent person* (wherever relevant and available).
 - c. Name of environmental consultant and accredited laboratory conducting environmental monitoring, analysis of environmental samples and submitting reports to the DOE.



FORMAT OF EMP

Chapter 4: Training Requirement

- a. Plan for staff training in order to develop competency to discharge responsibilities on environmental requirements and compliance. The training areas shall include maintenance and performance monitoring of all P2M2 (LD-P2M2, IETS, APCS, STS, management of scheduled waste), wherever relevant.



FORMAT OF EMP

Chapter 5: Environmental Requirements

a. EIA Approval Conditions (**COAs**)

b. **LD-P2M2** document

c. Pollution prevention and mitigation measures (**P2M2**) to be implemented as in the Table 6.1.

Table 6.1: Pollution Prevention and Mitigation Measures (**P2M2**) To Be Implemented

Project activities and environmental issues concerned	Impacts	P2M2 recommended in EIA Report	P2M2 to be implemented

- (Note: The contents of the above Table are to be derived from “Summary of Impacts and pollution prevention and mitigation measures” presented in the EIA Report and additional requirements stipulated in the EIA approval conditions (COA). P2M2 shall be those which can be described as “state of the art technologies” or “industry best practices”).



FORMAT OF EMP: P2M2

WATER POLLUTION CONTROL

- a. Water pollution control monitoring
- a. Effluent treatment
- b. Temporary sullage and sewage treatment
- c. Permanent sullage and sewage treatment
- d. Control of oil and grease, concrete wash, etc.

AIR POLLUTION and NOISE CONTROL

- a. Air pollution control monitoring
- b. Air pollution control
- c. Noise monitoring
- d. Noise control



FORMAT OF EMP: P2M2

MATERIALS AND WASTE MANAGEMENT

a. Raw materials and stockpiles.

- proposal for the management of raw materials, including chemicals, fuels, etc., and stockpiles.

b. Solid waste.

- proposal for the management of solid waste during land disturbance and construction phase.

c. Biomass.

- proposal for the management of biomass during land clearing and construction phase.



FORMAT OF EMP: P2M2

MATERIALS AND WASTE MANAGEMENT (cont..)

- d. Spoils/dredge materials/construction waste.**
 - proposal for the management of spoils/ dredge materials/construction waste during land disturbance/earthwork and construction phase.
- e. Open burning.**
 - Measures to prevent occurrence of open burning.

Housekeeping.

- proposal for implementing best practices in general housekeeping, including housekeeping of the vehicles and machinery maintenance area.



FORMAT OF EMP: P2M2

SCHEDULED MANAGEMENT

WASTE

- Proposal for the management of scheduled waste to comply with Environmental Quality (Scheduled Waste) Regulations 2005 generated during construction and post construction stages.



FORMAT OF EMP: P2M2

EMERGENCY RESPONSE PLAN (ERP)

- Name and contact details (mobile phone number, e-mail address) of the professional who has been tasked to prepare the ERP and the schedule for its preparation and submission to DOE.



FORMAT OF EMP: P2M2

ABANDONMENT AND CLOSURE PLAN

- In a particular case where the project proponent intends to abandon a project whether it is in the construction stage or after it has started operation, an abandonment and closure plan shall be prepared.
- Decommissioning and closure plan is especially relevant to extractive industries such as minerals mining and oil and gas exploration and extraction.



FORMAT OF EMP: P2M2

EMERGENCY RESPONSE PLAN (ERP)

- Name and contact details (mobile phone number, e-mail address) of the professional who has been tasked to prepare the ERP and the schedule for its preparation and submission to DOE.

DECLARATION

The Project Proponent is required to make a declaration that all the actions/measures/plans outlined in the EMP will be implemented as in the Table 6.2.

DECLARATION BY PROJECT PROPONENT/AUTHORIZED PERSON

I certify that the Environmental Management Plan (EMP) has been prepared with my knowledge and I shall undertake the responsibility to ensure the actions/plans/ and pollution prevention and mitigation measures (P2M2) stated in the EMP will be implemented. I have provided sufficient allocation for the implementation of the EMP and P2M2.

PROJECT TITLE:

.....
.....

PROJECT ADDRESS/LOCATION:

.....
.....

.....

Name of project proponent/authorized person

Signature: (.....)

Date:

ENVIRONMENTAL MANAGEMENT PLAN PREPARATION CHECKLIST

PROJECT TITLE:

NAME OF PROJECT PROPONENT:

NAME OF CONSULTANT:

RECOMMENDED POLLUTION PREVENTION AND MITIGATION MEASURES (P2M2s) AND EIA APPROVAL CONDITIONS (COAS) COMPLIANCE

P2M2 RECOMMEND ED OR COA NUMBER....	ACTIONABLE ITEM IN EMP ON PAGE	NOTES



Benefits of Effective EMPs

- Ensure environmental awareness
- Ensure regular training
- Ensure Consistent, regular monitoring
- Progressive action plans, responding to change
- Opportunity to document changes and update approaches



EMP –Monitoring Reports

Environmental Impact Monitoring
Objectives:

- Test predictions
- Improve prediction techniques
- Act as early warning system
- Evaluate effectiveness of mitigation measures proposed



EMP –Monitoring Reports

Types of monitoring

- ✓ Baseline Monitoring
- ✓ Compliance Monitoring (CM)
- ✓ Impact Monitoring (IM)
- ✓ Performance Monitoring (PM)
- ✓ Environmental Audit



Baseline Monitoring

- part of the baseline study
- prerequisite to an effective post EIA monitoring programme
- during scoping stage
- integrated with impact prediction and assessment and readjusted as necessary



Compliance Monitoring

- Monitoring also serves the purpose of ensuring the EIA conditions of approval (COAs) are complied with. In this phase, an environmental audit may also be carried out to assess the overall project compliance and opportunity for optimization and further improvement in environmental management of the project.



Compliance Monitoring

- to ensure, during the life cycle of the project the proponent meets all statutory requirements
- monitoring report to submit to DOE periodically
- checking whether or not a measure has been physically implemented



IMPACT MONITORING

- Monitoring activities will be conducted to verify that the findings of the EIA study of the potential impacts identified during EIA scoping process are correct, appropriate mitigation and prevention measures are properly implemented, and the measures are effective in mitigating the adverse impacts to the environment.



Performance Monitoring

Monitoring may also involve the monitoring the performance of pollution control systems and other mitigation measures.



Record Keeping

- Document that records the monitoring activities & the findings
- Prepared according to what has been specified in EMP
- Frequency – usually quarterly, but can be more frequent for projects in sensitive areas or during its critical stage



What Auditor should look for

- Check if the EMP has been updated according to project phase/ needs – one EMP / many EMPs?
- Changes on ownership/ responsibilities?
- Previous EMPs and other records (LDP2M2, ESCP, Earthwork Plan) shall be kept for reference – at project site
- Check for any revision for other documents?
- Check if the auditee has conducted their Monitoring Programmes & submit reports to DOE according to schedule specified in EMP



What Auditor should look for (contd)

- Check the sampling and monitoring stations during site audit. Verify by checking and interviewing
- Monitoring done at appropriate time? Any comment on parameters, sampling locations & frequency? Shall it be changed? Any parameter to be dropped or added?
- Any suspicious / funny data?
- Report your findings and recommendations



Possible follow up from DOE

- For projects that failed to comply, DOE will send reminder letters or directives under Section 34A(7) of the Environmental Quality Act to the project proponent who do not submit monitoring reports
- Take legal action such as issuing a Written Notice under Section 31 and 37 of the Environmental Quality Act, impose legal action for serious offences.



- End of module