

# ESCP and LD-P2M2

## Keynote Address

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Change. (MESTECC)

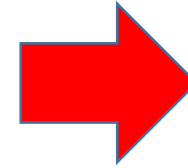
# Erosion and sedimentation in Malaysia

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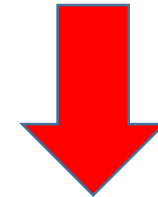
- Rapid growth development has bring land disturbing activities all over the country.
- Land disturbing activities would bring soil erosion and sedimentation that would threaten environment and human life.
- Uncontrolled and ineffective management of land disturbing activities contribute to serious environmental problem especially water pollution.

# Erosion and sedimentation in Malaysia

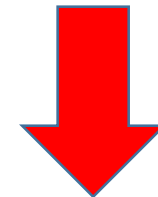
Development → Land Disturbing



Erosion



Sedimentation



Impact Water Quality





# Land Disturbance Activities

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- Clearing trees



- Clearing vegetation



# Land Disturbance Activities

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- Excavating

# Land Disturbance Activities

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- Sloping ground



# Land Disturbance Activities

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- Earthwork



# Land Disturbance Activities

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- Sand extraction



# Impact from land disturbing activities



- Soil erosion



- Sedimentation



# Impact from land disturbing activities

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- River pollution



# Impact from land disturbing activities

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- River pollution



# Impact from land disturbing activities

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- River pollution



# Banjir kuning bagai tsunami ancam Kelantan

Dr Wardah Tahir



KEADAAN rumah dan jalan utama ke bandar Tumpat yang musnah dibawa arus deras di Kampung Tanjung Kuala, Tumpat. - Foto Nik Abdullah Nik Omar

Banjir besar yang melanda Kelantan pada Disember lepas adalah antara yang terburuk dalam sejarah negara. Menurut Pengerusi Jawatankuasa Bencana Banjir Kelantan, Datuk Seri Mustapa Mohamed, setakat ini kerugian infrastruktur dan aset awam adalah dianggarkan sebanyak RM200 juta. Ini belum termasuk kerugian dialami orang persendirian dan perniagaan.

Luar biasanya banjir kali ini adalah skala kemusnahan yang tidak tergambar sebelum ini

Kampung Orang Asli Gua Musang diteroka pembalok, peladang

## Kawasan tadahan air bukit musnah

Oleh AIMUNI TUAN LAH

**GUA MUSANG** - Kira-kira 50 kawasan tadahan air bukit masyarakat Orang Asli di sini diancam kemusnahan ekoran aktiviti pembalakan dan perladangan yang tidak terkawal di kawasan tersebut.

Ahli Dewan Undangan Negeri Galas, Ab. Aziz Yusoff berkata, setakat ini sebanyak 17 kawasan tadahan air di 17 buah perkampungan Orang Asli didakwa telah musnah akibat aktiviti tersebut.

Menurut beliau, kesan hakisan dari kawasan bukit juga didakwa mengancam nyawa Orang Asli terutama ketika musim hujan.

"Isu ini bukan perkara baharu dibangkitkan oleh Orang Asli memandangkan kemusnahan alam sekitar di kawasan penempatan mereka dilaporkan semakin parah.

"Kawasan penempatan mereka kini seolah-olah menjadi sebuah pulau apabila dikelilingi



Ab. Aziz (kanan) meninjau sebatang sungai yang berkeladak dan hampir kering akibat kegiatan pembalakan dan perladangan di Pos Brooke, Gua Musang kelmarin.



KAWASAN hutan yang diratah boleh menyebabkan berlaku hakisan tanah dan mengancam penempatan Orang Asli di Pos Brooke, Gua Musang.



KERATAN Kosmo' semalam.

dengan ladang sayur-sayuran dan kawasan pembalakan," katanya.

Ab. Aziz berkata demikian

ketika meninjau perkampungan Orang Asli di Pos Brooke di Tanah Tinggi Lojing di sini kelmarin.

Beliau berkata, air sungai yang dahulunya jernih kini bertukar menjadi kotor, kering dan beracun

akibat ditimbus tanah ladang serta sisa racun yang mengalir ke lembah sungai.

"Hasil hidupan sungai seperti ikan juga semakin berkurangan sekali-gus menjejaskan sumber makanan serta pendapatan Orang Asli.

"Aktiviti pembalakan juga menyebabkan kawasan kubur masyarakat orang asli musnah," katanya.

Menurutnya, bagi mengatasi masalah tersebut, kerajaan negeri perlu menghadkan keluasan aktiviti perladangan serta pembalakan pada masa akan datang agar kemusnahan alam sekitar dapat dikekang.

"Orang Asli juga mahukan agar tanah yang mereka duduki sejak turun-temurun diwariskan segera sebagai kawasan tanah adat," katanya.

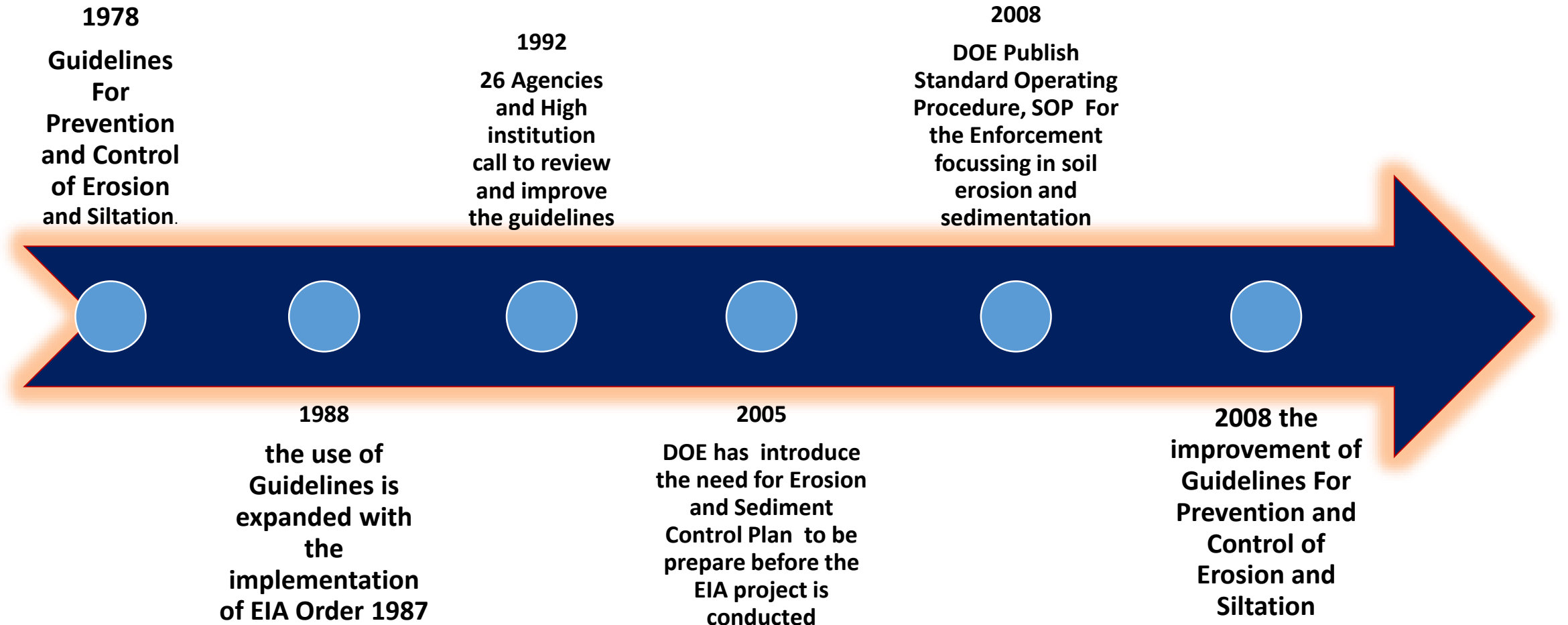
# DOE roles in soil erosion and sedimentation control

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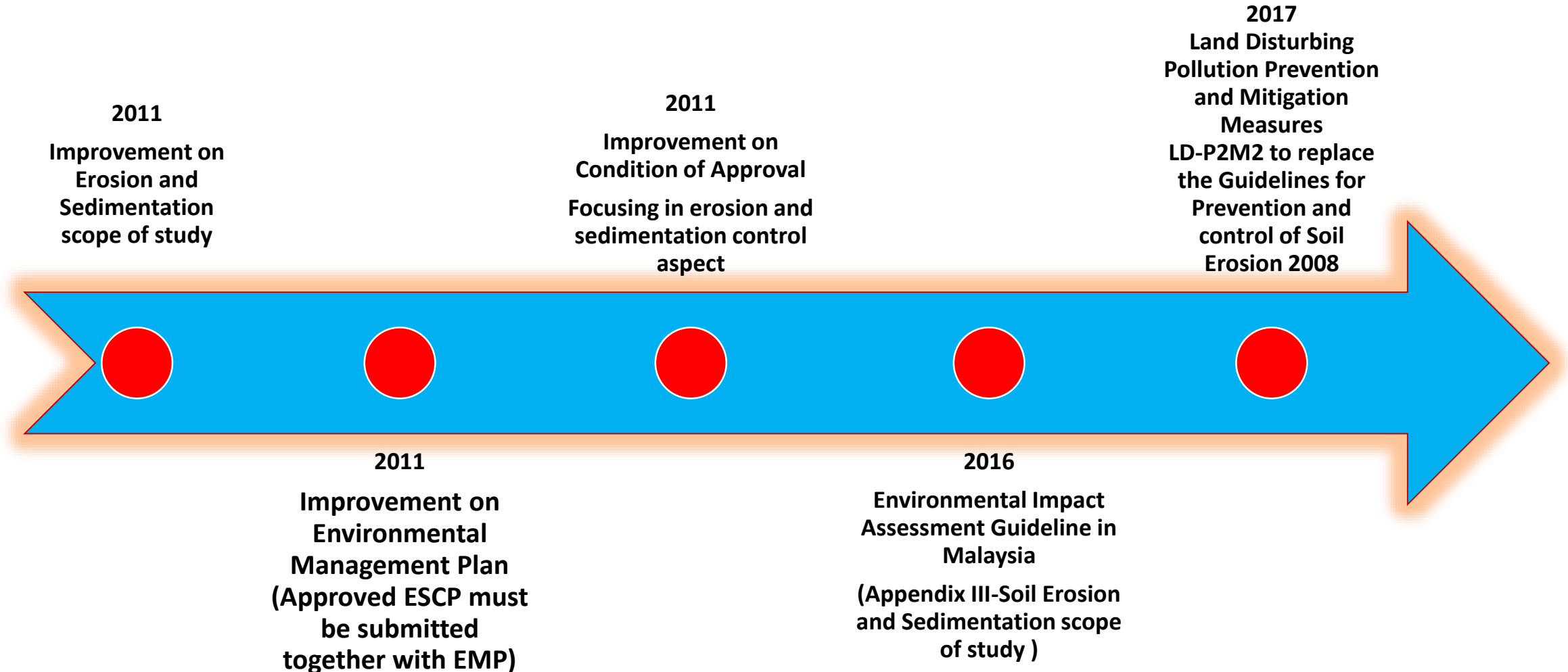
- Department of Environment (DOE) has play its important role since 1978 with the publication of **Guidelines For Prevention and Control of Erosion and Siltation**
- In the early 1980's, DOE play its important role via publication of specific document and guideline in terms of soil erosion and sedimentation to be use for project proponent, engineer and contractor in the development project.
- Since 1988, with the implementation of EIA Order (1987), DOE has plays its important role in the enforcement at the project site for each EIA prescribed activities.



# DOE effort towards erosion and sediment control



# DOE effort towards erosion and sediment control

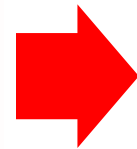




# EIA Implementation

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Most EIA projects will involve massive land disturbance activities.



Erosion and sedimentation is identified as major impact from most EIA project.



Poor implementation of erosion and sediment control will affect the quality of river

# EIA Implementation

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2 important issues regarding soil erosion and sedimentation in EIA:

1

- The preparation of EIA reports in terms of soil erosion and sedimentation

2

- Poor erosion and sediment control from land disturbance activities

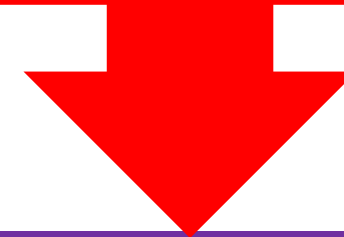


# Introduction to the LDP2M2

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Latest  
Improvement by DOE  
Towards Erosion and  
Sedimentation Control

Guidance Document on The Preparation of Soil Erosion  
and Sedimentation EIA (Appendix III) –  
Environmental Impact Assessment Guideline in Malaysia  
(DOE, 2016)



Implementation of Land Disturbance Pollution  
Prevention and Mitigation Measures (LD-P2M2).  
LDP2M2 as a part of EMP (DOE, 2017)

# What is LDP2M2 ?

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- “**a system for erosion and sediment control** for EIA projects, by considering the construction **methods statements processes sequence phasing** materials and practices **during any land disturbing** activities through the protection of natural resources **by incorporation of best management practices** (and/or pollution prevention mitigation measures to comply with the EIA’s approval conditions”)

Guideline on LDP2M (DOE, 2017)



# What is LDP2M2 ?

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**a system for erosion and sediment control**

**methods statements processes**

**during any land**

**sequence phasing**

**disturbing activities**

**by incorporation of best management practices**

**Important keyword in LDP2M2**

# Important elements in LDP2M2

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**A systematic  
erosion and  
sediment  
control**

**Methods  
statements  
processes  
sequence  
phasing**

**Control at  
any land  
disturbing  
activities**

**Incorporating  
Best  
Management  
Practice**



# The Objective of LDP2M2

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- To ensure the project proponent to take into account and prevent the potential erosion and sediment at the beginning of the project by the EIA preparation.  

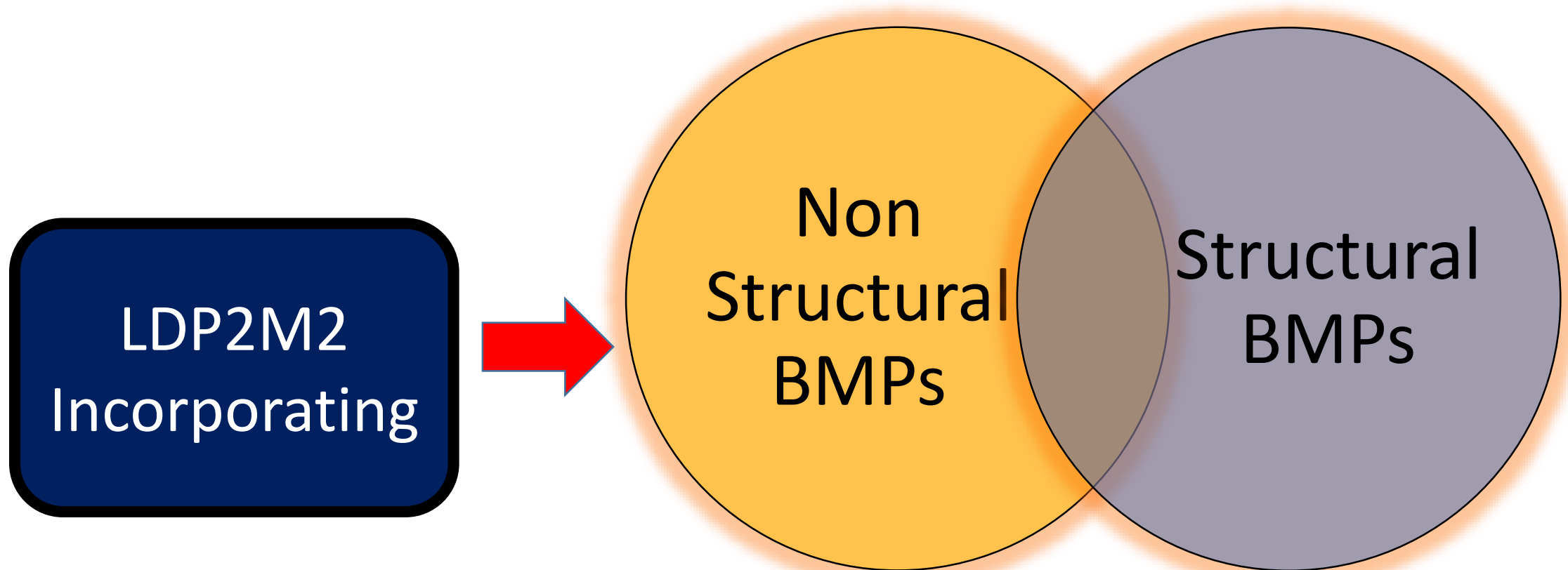
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- To ensure project proponent identify the sequence of the project implementation before contract being made.  

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- To strengthen DOE roles in the enforcement activities and taken legal action that involve in erosion and sedimentation.  

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# Important elements in LDP2M2

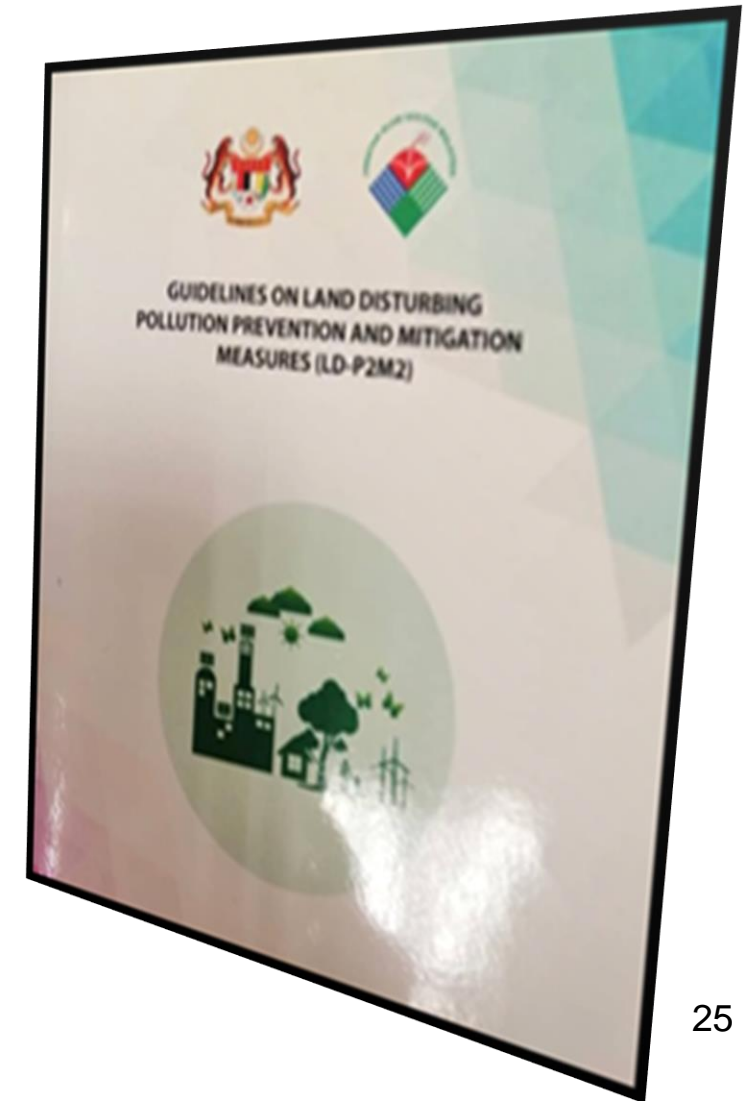
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# Guideline for LDP2M2

Guidelines on Land Disturbing Pollution Prevention and Mitigation Measures (LD-P2M2)

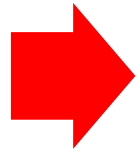


# Guideline for LDP2M2

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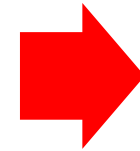
As a project-specific document to be prepared by the EIA Consultant at the EIA/EMP stage.

To address and detail out all the elements that are required for applying the concept of LD-P2M2 into the project development;



Guides the Project Proponent's personnel, namely Environmental Officer in supervising the implementation of the LD-P2M2.

Includes the installation, inspection and maintenance of the Best Management Practices, as well as in preparing the required documentation and reports.



Focus on the prevention, mitigation and control of the discharge from the development area containing the major pollutant (suspended solids) resulting from land disturbing activities.



# Who should prepare LDP2M2

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Registered as EIA  
consultant

Registered under soil  
erosion and  
sedimentation scope of  
study

Certified Professional  
Erosion and Sediment  
Control Plan (CPESC)

# Differences between LDP2M2 & ESCP

NO.	ESCP	LDP2M2
1.	All development projects involved earthworks under local government requirement	EIA projects under Section 34A, EQA 1974 Emphasis on pollution prevention and mitigating measures (P2M2)
2.	Approve by DID Review with full authority by DID Design (ESCP), Standard and specification BMPs based on JPS requirement.(MSMA)	Approve by DOE Review with full authority by DOE LDP2M2 adopt Standard and specification BMPs from JPS requirement and others. Preparation of LDP2M2 plan involves more on the identification, placement or implementation of BMPs. Design aspect elements technically based on JPS requirement. LDP2M2 outlines the minimum standard of P2M2 application notwithstanding the availability of the plan or drawing.



# Differences between LDP2M2 & ESCP

3.	Enforceable by JPS or need technical support attended by JPS personnel	Enforceable by DOE - DOE has no authority over “errors” or “inadequacies” in the approved ESCP, but with LD-P2M2 DOE is given more authority to hold project parties accountable for inaction on site.
4.	Typically submitted by Contractor prior to start of work but Consultant may submit a conceptual in advance of tender award or during submission of EMP	Required to be submitted for approval at the EIA stage by the Qualified Person.

# Differences between LDP2M2 & ESCP

5.	When Contractor prepares this document, he becomes the accountable party of the mitigation measures, without the Project Proponent's involvement.	In line with DOE's Guided Self-Regulation policy where all parties are involved in P2M2s, from Project Proponent up to the Contractor, since LD-P2M2 document is formulated at EIA stage and carried forward to construction stage.
6.	If submitted by Contractor, there is a risk of inadequate coverage in the design and tender document, resulting in resources not allocated early enough.	Submission during EIA stage allows for mitigation measures to be incorporated into designs as well as tender document.



# Differences between LDP2M2 & ESCP

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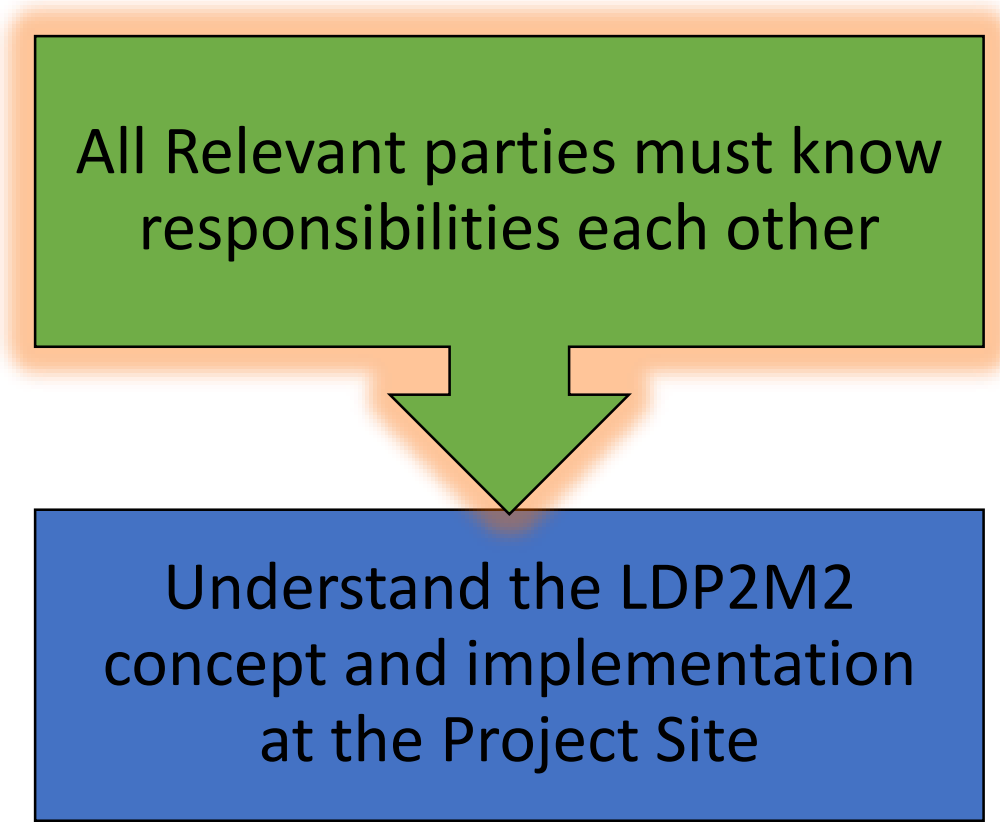
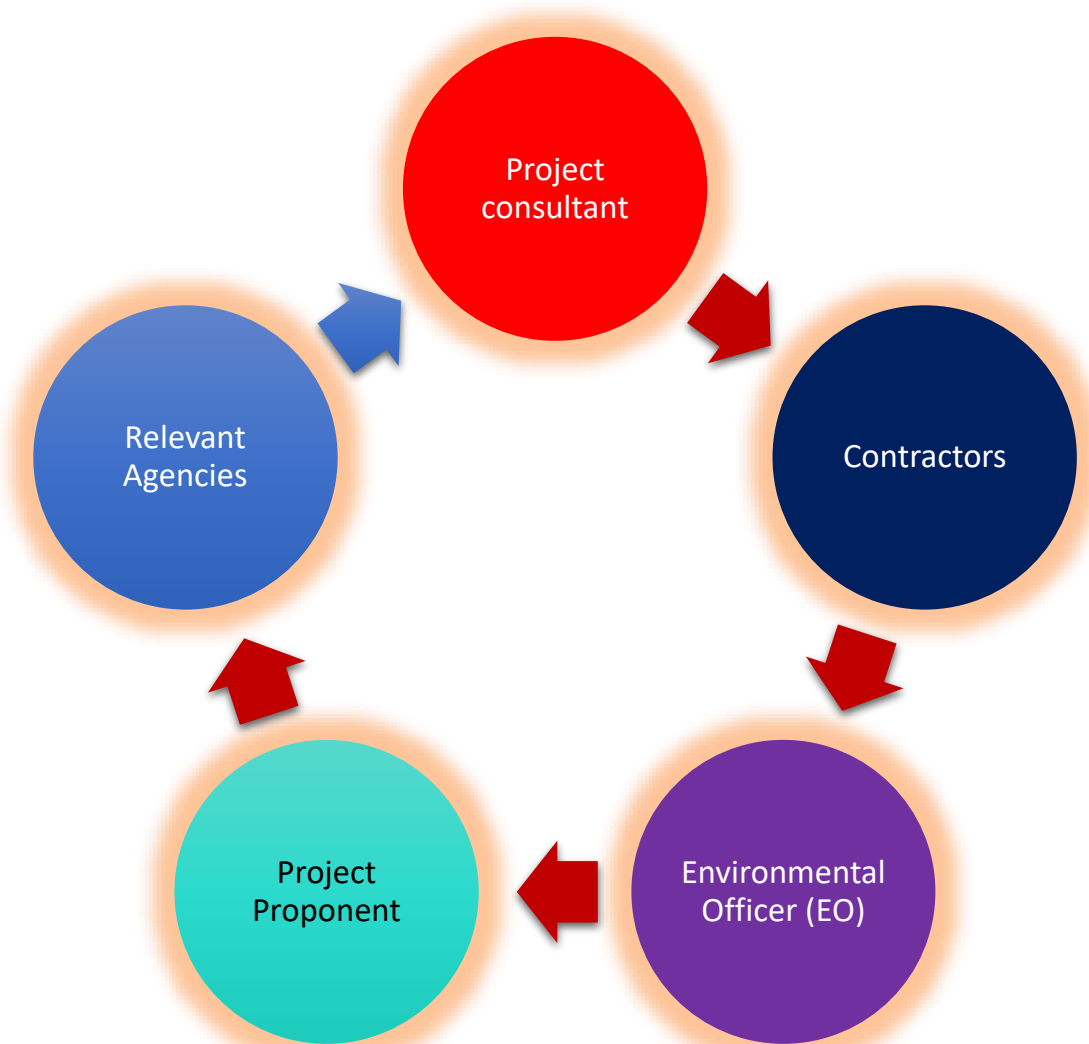
7.		The approved LD-P2M2 document can be used to produce the ESCP (if required) or vice versa while changing the document/drawing name whichever deemed appropriate.
8.		Will require QP to be thoroughly cognizant of the project including construction sequences, all land-disturbing activities that will cause erosion and sediment discharge, project's critical path method

# Differences between LDP2M2 & ESCP

9.	Currently, the ESCP may address the initial and final phase of construction but may not address interim construction phases with adequate temporary BMPs	One of the main focus of LD-P2M2 will be on the progressive state of the site and interim BMPs are expected to be highlighted.
10.	ESCP components are often designed as constructional features and scheduled to be built as permanent solutions typically towards the advanced stage of the civil works, not temporary solutions during early phase of the construction which involved massive clearing of earth covering vegetation, slope cutting and profiling, and earthmoving works.	One of the main focus of LD-P2M2 will be on the progressive state of the site and interim BMPs are expected to be highlighted.

# LDP2M2 effectiveness

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Thank You