



SWaM 2019

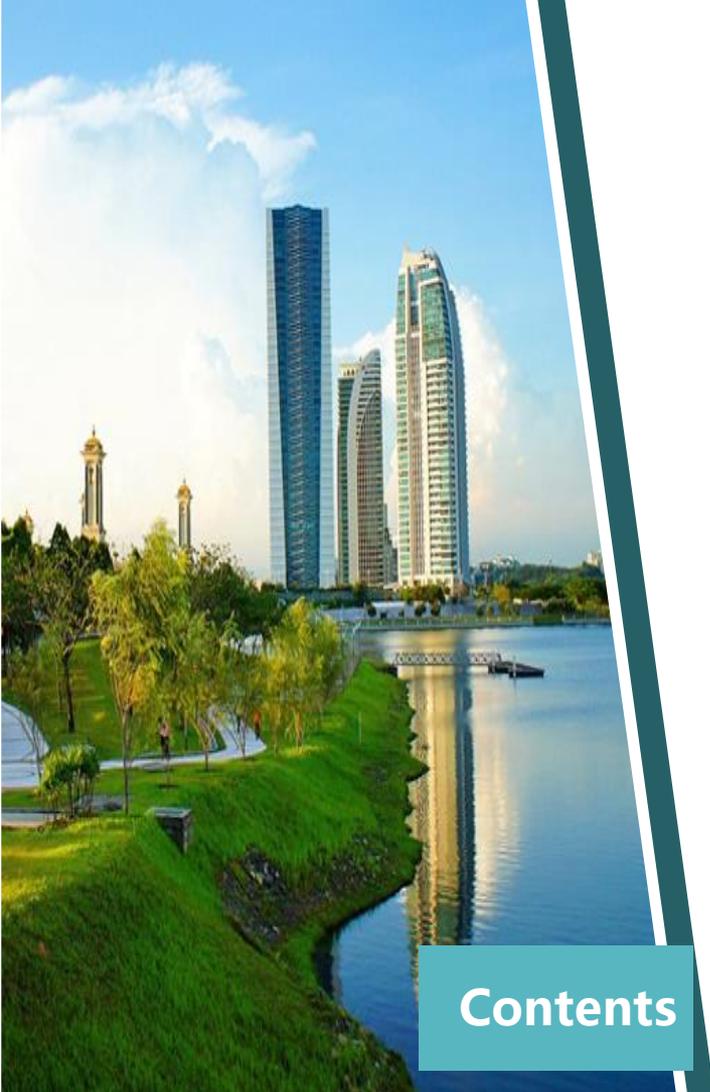
NATIONAL CONFERENCE OF STORMWATER MANAGEMENT

“Stormwater Pollution Prevention Plan”

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1

INTRODUCTION

Stormwater Pollution Prevention Plan





URBANIZATION VS WATER QUALITY



Urbanization

Urbanization will grow from 71% in 2010 to 85% in 2040

Population will increase to 45 million in 2050



More than 90% of Malaysia population live in cities by 2050



Water Quality



Pollution impacts negatively on the sustainability of water resources.



55%
in water demand

URBAN WATER POLLUTION IN MALAYSIA

Cities Location in Malaysia

35%

River



31%

Stream



19%

Pond and
Lake



15%

Sea



These cities and towns generate various pollutants from different sources. As there is no proper enforcement to control runoff quality, the urban areas discharge huge amount of pollutants in nearby waterbodies.

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ISSUES AND CHALLENGES

Stormwater Pollution Prevention Plan





ISSUES AND CHALLENGES



Governance

Finance



People



Technologies





ISSUES AND CHALLENGES - GOVERNANCE



ISSUES AND CHALLENGES - GOVERNANCE

Governance structure = Fragmented Jurisdiction





ISSUES AND CHALLENGES - ENFORCEMENT



Offences: Effluent Discharges Violations

Enforcement Authority:

Department of Environment/Local Authority

1

Offences: Land-Use Violation

Enforcement Authority:

Land Administrator/
Local Authority

2

Offences: Littering

Enforcement Authority:

Local Authority

3

Offences : Unauthorized Discharges and Abstraction

Enforcement Authority:

Land Administrator

4

Too many pollution sources to be monitored and inspected.



ISSUES AND CHALLENGES - PEOPLE

1. Lack Of Awareness



4. Rapid urbanization/ industrialization



5. Competency



2. High water consumption



3. Unsustainable lifestyle





ISSUES AND CHALLENGES - TECHNOLOGIES

T

ECHNOLOGIES

ECHNOLOGIES



01

Innovation

02

Green Infrastructure

03

Lack of data/Information



ISSUES AND CHALLENGES - FINANCE



Maintenance

Local Authority and state government need to expand expenditure annually for the development of drainage facilities including O& M.



Enforcement

Establishment of enforcement team



Inadequate Funding

Adequate Funding is a binding constraint for effective stormwater Management

3

WAYFORWARD

Stormwater Pollution Prevention Plan



WAYFORWARD - GOVERNANCE



UNDANG-UNDANG MALAYSIA

01 Rules and Regulations



Enforcement 02

GOVERNANCE

Devolution of
03 Power

Maintenance 04





WAYFORWARD - PEOPLE

CLEAN WATER



Public Outreach Program



Competency



MSMA Training



01

03

02

04

Stakeholder Participation

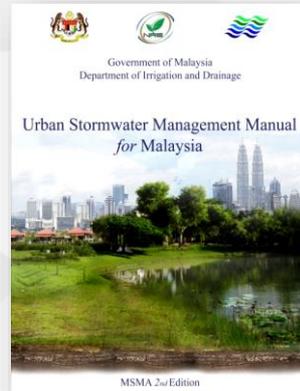


Certification



Stake Holder involvement during preparation of Master Plan

WAYFORWARD - TECHNOLOGIES





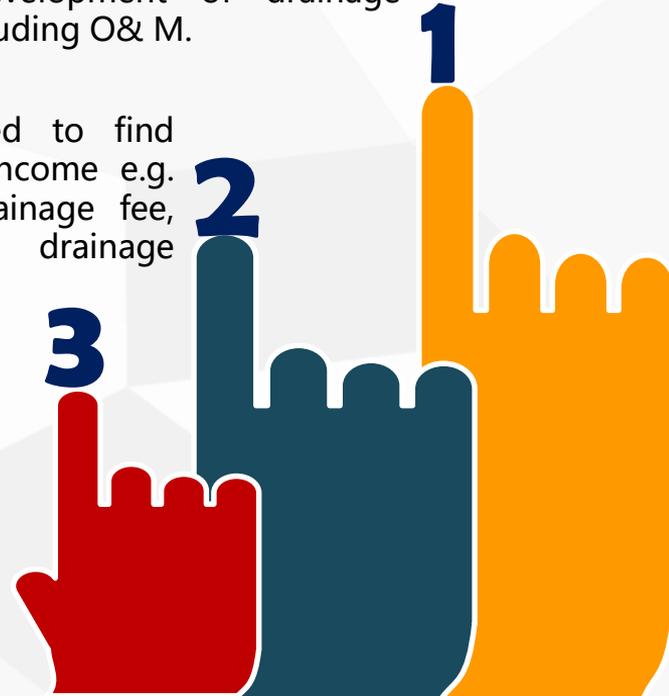
WAYFORWARD - FINANCE



Local Authority and state government need to expand expenditure annually for the development of drainage facilities including O& M.

Local authority need to find another source of income e.g. assessment rate, drainage fee, Licensing fee or drainage contribution.

ESC security deposit for every development



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CONCLUSION

Stormwater Pollution Prevention Plan





» Conclusion

- Stormwater issues should be solved in an integrated manner since many parties are involved.
- The level of competency in stormwater related matters need be raised
- Increase funding especially for maintenance is necessary.
- Review the existing law to strengthen the enforcement.



**SEKIAN TERIMA
KASIH**

JABATAN PENGAIRAN DAN SALIRAN MALAYSIA
KEMENTERIAN AIR, TANAH DAN SUMBER ASLI