

## ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS

### Malaysia 2024 Report (Stormwater Management)

#### Outcome Indicators

IWRM Issue 3 - Stormwater Management (14 indicators)			
Indicator Types	Indicators	Progress	Description
Outcome Indicators	1. Percentage of local authorities/cities having a stormwater management policy to manage flash floods	100%	See Note 1
	2. Percentage of local authorities/cities having a stormwater quality management policy to protect river/drainage system water quality	40%	
	3. Percentage of local authorities/cities having a rainwater harvesting policy	35%	See Note 2

#### Note 1

The Cabinet of Malaysia issued a directive for the use of Stormwater Management Manual (MSMA) throughout the country in year 2001. In year 2006, the requirement of the MSMA's practice has been incorporated in National Urbanisation Policy as one of the strategy to provide a quality services on infrastructure and utilities. Most of the states in the country agree to adopt and implement MSMA's practices and standards in planning a development.

#### Note 2

National Water Resources Council 2014 recorded that 6 states in Malaysia amended the related state law to apply rainwater harvesting practice in their state.

#### Enabling Environment Indicators

EE Indicators	1. Any "Policy" on stormwater management	8	See Note 1
	2. Any "Legislation/Regulations" on stormwater management	8	See Note 2
	3. Any "Financial framework and Financing plans" for stormwater management	2	

#### Note 1

The Cabinet of Malaysia issued a directive for the use of Stormwater Management Manual (MSMA) throughout the country in year 2001. In year 2006, the requirement of the MSMA's practice has been incorporated in National Urbanisation Policy as one of the strategy to provide a quality services on infrastructure and utilities.

#### Note 2

The National Council for the Local Government approved for the Erosion and Sediment Control Plan (ESCP) as mandatory requirement in earthworks submission for Planning Permit at all local governments starting from 2005.

## ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS

### Institutional Set-up Indicators

<b>IS Indicators</b>	1. Any national agency entrusted with the responsibility to support local authorities/cities to manage stormwater	8	<b>See Note 1</b>
	2. Any formal institutional arrangements among related agencies to support local authorities/cities to manage stormwater	5	

#### **Note 1**

Department of Irrigation and Drainage (DID) have been entrusted by all state authorities to support local authority in managing stormwater. The role played by DID is providing technical advisory and implement stormwater project.

### Management Tools Indicators

<b>MT Indicators</b>	1. Any national stormwater management master plan	8	<b>See Note 1</b>
	2. Any code of practices/design manual for stormwater management	8	<b>See Note 2 &amp; Note 3</b>
	3. Any computer modelling of stormwater quality and quantity	8	<b>See Note 4</b>
	4. Any urban stormwater flood warning system/telemetric system	7	<b>See Note 5</b>
	5. Any integrated stormwater management data center	7	<b>See Note 5</b>
	6. Any 24-hour Call/Feedback Centre for reporting flash floods	7	<b>See Note 6</b>

#### **Note 1**

Comprehensive Study on Long Term Solution in Combating Flash Floods was completed in year 2013 to identify flash flood zones throughout Malaysia and measures required in handling flash flood issues. Currently DID Malaysia has been conducting Master Plan Study on Urban Stormwater Management for major towns. Until 2023, 33 master plan has been completed, 11 ongoing studies.

#### **Note 2**

Before year 2000, Malaysia used Planning and Design Procedures No 1 : Urban Drainage Design Standards and Procedures for Peninsular Malaysia which being published in 1975 in planning and design drainage system using the concept of rapid disposal. Realising rapid disposal approach is not able to solve flash flood issue holistically, Malaysia introduced new and more comprehensive approach with Stormwater Management Manual in year 2000. This new manual introduced the approach of "Control at Source" where river would not been burdened by significant additional flow which occur after development.

#### **Note 3**

In year 2011, Malaysia introduced Urban Stormwater Management Manual for Malaysia to simplify and improve the older version of the manual. The manual maintained the approach of "Control at Source" as the underlying concept.

## **ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS**

### **Note 4**

With the new manual introduced in year 2000, DID encourage the usage of computer modeling software to reduce time taken for detail design process. Softwares such HEC-RAS, HECHMS, and XP-SWMM been used in designing a urban drainage system.

### **Note 5**

The flood warning and telemetric system and integrated stormwater management data centre in Stormwater Management and Road Tunnel (SMART) is one of the example of best integrated stormwater management in Malaysia.

### **Note 6**

Public Complaint Management System (SisPAA) has been introduced to provide the effective channel for public in reporting flood and flash flood occurrences.