

ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS

Singapore 2013 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%	Stormwater Management Policy to manage floods is administered by PUB
	2. Percentage of local authorities/cities having a stormwater quality management policy to protect river/drainage system water quality	NA	SG's drainage is urbanized channels designed to convey stormwater which are dry most of the time
	3. Percentage of local authorities/cities having a rainwater harvesting policy	NA	Rainwater harvesting is not a stormwater management measure

Enabling Environment Indicators

EE Indicators	1. Any "Policy" on stormwater management	Yes	PUB adopts the 3key strategies:- <ul style="list-style-type: none"> • Providing adequate drainage infrastructure ahead of new developments • Implementing flood protection measures by stipulating requirements such as minimum platform levels and crest levels in the COP Improving drainage in flood prone areas continually by widening or deepening drains and/or raising low-lying roads
	2. Any "Legislation/Regulations	Yes	The Sewerage & Drainage Act empowers PUB to ensure that proper drainage systems are

ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS

	” on stormwater management		designed for the purposes of flood protection
	3. Any “Financial framework and Financing plans” for stormwater management	Yes	Drainage improvement works are fully funded by Singapore government

Institutional Set-up Indicators

IS Indicators	1. Any national agency entrusted with the responsibility to support local authorities/cities to manage stormwater	Yes	Stormwater is managed at a single national level by PUB
	2. Any formal institutional arrangements among related agencies to support local authorities/cities to manage stormwater	Yes	Stormwater is managed at a single national level by PUB

Management Tools Indicators

MT Indicators	1. Any national stormwater management master plan	Yes	<p>PUB adopts the 3key strategies:-</p> <ul style="list-style-type: none"> • Providing adequate drainage infrastructure ahead of new developments • Implementing flood protection measures by stipulating requirements such as minimum platform levels and crest levels in the COP • Improving drainage in flood prone areas continually by widening or deepening drains and/or raising low-lying roads
	2. Any code of practices/design manual	Yes	PUB’s Code of Practice on Surface Water Drainage stipulates the planning and

Source: ASEAN Working Group for Water Resources Management (AWGWRM) – July 2015
[weblink - aseaniwrm.water.gov.my]

ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS

	for stormwater management		design requirements for surface water drainage
	3. Any computer modelling of stormwater quality and quantity	Yes	PUB uses MIKE-11, a modeling software developed by the Danish Hydraulic Institute
	4. Any urban stormwater flood warning system/telemetric system	Yes	PUB is updated by meteorological agency on heavy rainfall. PUB uses a network of 171 water level sensors island-wide. 49 CCTVs are also available for public viewing
	5. Any integrated stormwater management data center	Yes	PUB continues to strengthen flood response capability in settling up a dedicated Operation Centre equipped with live feeds of water level sensors, CCTVs, media reports, etc
	6. Any 24-hour Call/Feedback Centre for reporting flash floods	Yes	A 24-hour PUB hotline is available for public to feedback on all water related matters, including floods