

ASEAN IWRM Country Strategy Guidelines
- IWRM Monitoring Status Guidelines for ASEAN Countries

1. Background

The ASEAN Working Group on Water Resources Management (AWGWRM) has developed an ASEAN Strategic Plan of Action on Water Resources Management with the support from the Australian Government in 2005. To support the implementation of the Plan, ten project concept proposals were formulated and included in the Appendix of the Strategic Plan Report. One of the ten project concepts: Project Concept 2 is on the development of an “ASEAN IWRM Country Strategy Guidelines”. DID Malaysia was requested by the AWGWRM to organize and conduct a workshop to develop the details of the “ASEAN IWRM Country Strategy Guidelines”.

The workshop participants agreed that the generic ASEAN/IWRM framework will be structured on the following 6 major water management issues in ASEAN:

- Water Supply
- Irrigation
- Stormwater Management
- Floods Management
- Water Pollution Management
- Sanitation Management

Arising from the workshop the following outputs have been prepared for use by ASEAN countries to assist them in preparing and reporting on their respective countries’ IWRM action plans and strategies to address the above 6 thematic issues.

- (a) A set of specific IWRM goals for the above 6 key water-related issues in the region.
- (b) For each set of thematic goals a set of IWRM objectives to achieve the goals have also been identified, categorized under the 3 categories of GWP IWRM tools, i.e. Enabling environment, Institutional environment and Management tools.
- (c) Also indicators for measuring the progress in achieving the objectives associated with each of the thematic goals have been developed. They can be used for measuring regional performance and progress towards meeting the IWRM goals for the 6 key water related issues in the region.

2. The ASEAN IWRM Monitoring Status Guidelines

The Workshop participants in Malaysia have agreed to develop monitoring guidelines for six key water management issues that are considered important in ASEAN countries. They are as follows:

(a) Water Supply Management

- (b) Irrigation Management
- (c) Stormwater Management
- (d) Flood Management
- (e) Water Pollution Management
- (f) Sanitation Management

The following are the monitoring guidelines for the above 6 key water management issues.

IWRM Issue 1 - Water Supply Management (34 indicators)			
Indicator Types	Indicators	Progress	Description
Outcome Indicators	1. Percentage of population having access to piped drinking water	100 %	
	2. Percentage of water delivered to customer meeting WHO guidelines for drinking water quality	100 %	
	3. Average hour of water supplied/day	24/7	
	4. Per capita domestic water consumption	141 l/ day (2023)	
	5. Percentage of water supply metered	100%	
	6. Percentage of UFW/NRW	7.2%	PUB uses Distribution Losses, rather than UFW/NRW. Distribution losses refer to physical water losses in the network, such as leaks or bursts, that occur between the treatment plant and end users.
EE	1. Any "Policy" on water supply	Yes (8)	

Indicators	management	No (1-7) NA	
	2. Any "Legislation/Regulations" on water supply distribution management	8	
	3. Any "Legislation/Regulations" on water supply quality management	8	
	4. Any "Legislation/Regulations" on water conservation management	8	
	5. Any "Financial framework and Financing plans" for development of water supply	8	
	6. Any "Operator business plan" (Annual Budget, Manpower resource plan, etc.)	NA	-
IS Indicators	1. Any water supply planning and policy department	Yes (8) No (1-7) NA	
	2. Any water supply quality office, water testing lab, water sampling team	8	
	3. Any water supply operation centre	8	
	4. Any water conservation unit	8	
	5. Any water meter management unit	8	
	6. Any customer account/meter reading/billing unit	8	
	7. Any water meter workshop	8	
	8. Any water leak detection unit	8	
	9. Any 24-hr water supply call centre	8	
	10. Any water supply network maintenance unit	8	

	11. Any water supply meter management unit	8	
	12. Any water supply EMI unit	8	
MT Indicators	1. Any short and long term water demand projection and infrastructure development plan	8	
	2. Any water safety plan – e.g. water sampling programme, water testing lab, real time monitoring of water quality at water treatment plants and service reservoirs	8	
	3. Any water supply pressure monitoring system – e.g. pressure sensor/ monitoring in network, flow and level monitoring at service reservoirs, waterworks outputs	8	
	4. Any water conservation plan – e.g. water saving measures, public education programme	8	
	5. Any water supply meter installation plan – e.g. all new premises must be metered	8	
	6. Any monitoring of water treatment plant output meters – e.g. all are metered and the meters are checked periodically	8	
	7. Any water meter management system – e.g. comply with ISO/EU standard, error check system, meter replacement	8	

	programme, meter repair and testing facilities		
	8. Any water supply network record /mapping system, network asset management and pipeline replacement/ renewal programme	8	
	9. Any water supply leak detection programme	8	
	10. Any 24-hour Call Centre and Operation Centre for feedback on leak and deployment of crew for repair	8	