

## ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS

### Indonesia 2010 Report (Stormwater Management)

#### Outcome Indicators

<b>IWRM Issue 3 - Stormwater Management (14 indicators)</b>			
<b>Indicator Types</b>	<b>Indicators</b>	<b>Progress</b>	<b>Description</b>
<b>Outcome Indicators</b>	1. Percentage of local authorities/cities having a stormwater management policy to manage flash floods	0 %	The stormwater management policy in 2010 is still merged with the flood policy.
	2. Percentage of local authorities/cities having a stormwater quality management policy to protect river/drainage system water quality	0 %	Stormwater and flood are still categorized in the same type of disaster  (See Note 1)
	3. Percentage of local authorities/cities having a rainwater harvesting policy	0 %	

**Note 1** - In 2010, the definitions of floods and stormwater are still categorized in the same term. As stated in the Law No. 24 Year 2007 on Disaster Management, stated that a disaster is an event or series of events that threaten and disrupt the lives and livelihoods caused by natural factors and / or non-natural factors and human factors that result in human fatalities, environmental damage, loss of property, and psychological impact. Flood is an event or circumstance in which an area or land submerged due to increased water volume. Flood also can come suddenly with a large flow of water caused by the flow of the dammed river in the river channel. So flood and stormwater is still categorized under the same rules and regulations.

#### Enabling Environment Indicators

<b>EE Indicators</b>	1. Any "Policy" on stormwater management	Yes (8)	Effectiveness of Output is monitored and evaluated  Peraturan Pemerintah No. 42 Tahun 2008 tentang Pengelolaan Sumber Daya Air (Government Regulation Nr.
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			42 of 2008 regarding Water Resources Management)  (See Note 1)
	2. Any “Legislation/ Regulations” on stormwater management	Yes (8)	Effectiveness of Output is monitored and evaluated  UU RI No. 7 Tahun 2004 tentang Sumber Daya Air (Law of Indonesia Nr. 7 of 2004 regarding Water Resources)  (See Note 2)
	3. Any “Financial framework and Financing plans” for stormwater management	Yes (8)	Effectiveness of Output is monitored and evaluated  For Indonesia as a country, the financial frameworks and plans are described in the APBN (National Budget for Revenue and Expenditure). But especially for the capital Jakarta, financial frameworks and plans are also describe in the APBD (Local Budget for Revenue and Expenditure)

**Note 1** - In Government Regulation Nr. 42 of 2008 regarding Water Resources Management, Chapter VII, Clause 85 – 94, explained about water damage control that include efforts to pre-disaster prevention, countermeasures in the event of a disaster, and recovery from disasters.

**Note 2** - Meanwhile in Law of Indonesia Nr. 7 of 2004 regarding Water Resources, Chapter V, Clause 51 – 58, explained about provisions on the water damage control on rivers, lakes, reservoirs and dams, wetlands, groundwater basins, irrigation systems, and sea water on land shall be further regulated by government regulation.

### **Institutional Set-up Indicators**

<b>IS Indicators</b>	1. Any national agency entrusted with the responsibility to support local authorities/cities to manage stormwater	Yes (8)	Effectiveness of Output is monitored and evaluated  the national agency who manage the flood regulatory is
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**Source:** ASEAN Working Group for Water Resources Management (AWGWRM) – April 2015  
[weblink - [aseaniwrm.water.gov.my](http://aseaniwrm.water.gov.my)]

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			BNPB (Indonesian National Board for Disaster Management), and for the local authorities
	2. Any formal institutional arrangements among related agencies to support local authorities/cities to manage stormwater	Yes (8)	Effectiveness of Output is monitored and evaluated  the arrangements are being held by BNPB  (See Note 1)

**Note 1** - There is a formal institutional arrangement among PMI (Indonesian Red Cross) and BNPB MoU Nr. 1214/UM/III/ 2009 in March 2010 related disaster management operations in accordance with their roles, responsibilities, and functions and capacity building of the parties through education and training. The utilization of the assets of the parties to the disaster counters measurement such as emergency response activities mobilization of human resources of the parties and early recovery program.

### Management Tools Indicators

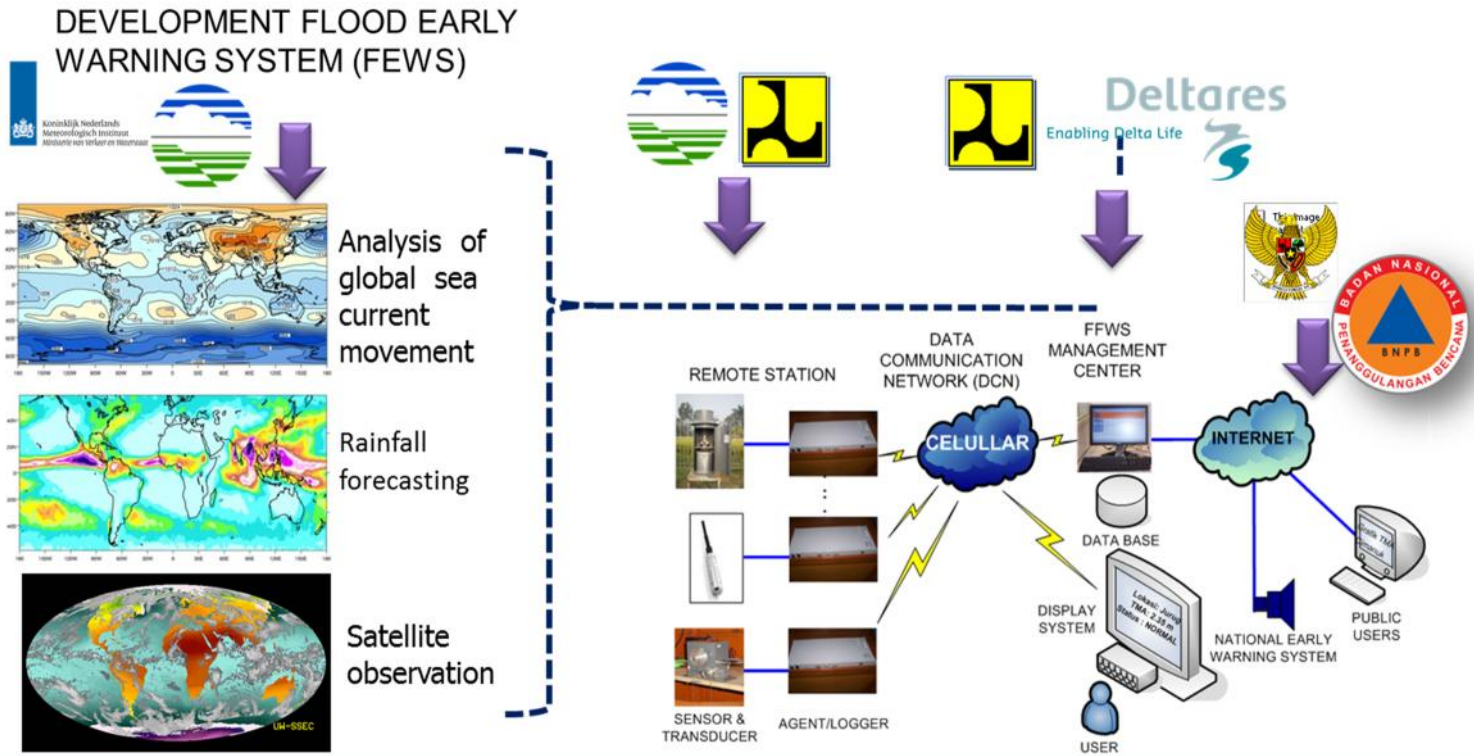
<b>MT Indicators</b>	1. Any national stormwater management master plan	No (4)	Existence of a plan to produce the Output.  In 2011 the policy is being prepared and in 2012 the policy has been made to a Draft
	2. Any code of practices/design manual for stormwater management	No (2)	Output recognized as a need
	3. Any computer modeling of stormwater quality and quantity	Yes (8)	Existence of a plan to produce the Output.  the modeling is set to Reducing Risk from Disasters and also to Strengthen the Indonesian Resilience, and created by:

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			<ol style="list-style-type: none"> <li>1. BPPT (Agency For The Assessment And Application Of Technology)</li> <li>2. LIPI (Indonesian Institute of Science)</li> <li>3. ITB (Bandung Institute of Technology)</li> <li>4. UGM (Gajah Mada University)</li> </ol>
	4. Any urban stormwater flood warning system/telemetric system	Yes (8)	<p>Existence of a plan to produce the Output. ‘</p> <p>There are Automatic Water Level Recorder Telemetry (AWLR) Systems that have been installed in specified and particular locations.</p> <p style="text-align: center;"><i>(See Note 1)</i></p>
	5. Any integrated stormwater management data center	Yes (8)	<p>Existence of a plan to produce the Output.</p> <p>Organized by National Agency for Disaster Management (Badan Nasional Penanggulangan Bencana– BNPB)</p>
	6. Any 24-hour Call/Feedback Centre for reporting flash floods	Yes (8)	<p>Existence of a plan to produce the Output.</p> <p>Organized by National Agency for Disaster Management (Badan Nasional Penanggulangan Bencana– BNPB)</p>

**Note 1** - The AWLR stations are regulated by The Ministry of Public Works and Housing Regulation Nr 05/PRT/M/2009, regarding Guidelines on Procedures for the Development of the Guessing Console In River / Channel Open Water Station.

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- Extend lead time by using satellite technology and cooperating with satellite management center,
- Improve the accuracy of hindcasting and forecasting by rainfall-runoff model, hydrodynamics and telemetry system ,
- Development and dissemination of complete flood risk maps through disaster evacuation training