

ASEAN IWRM PERFORMANCE REPORTS & MONITORING INDICATORS

Philippines 2013 IWRM Reports (Based on 2009 report framework for the six issues)

ISSUE 1 - WATER SUPPLY

Monitoring Indicators	Value
1. Percentage of population having access to piped drinking water	-
<p><u>Description</u> In the Philippines, the extent of water supply and coverage and population access to safe drinking water and sanitation services cannot be fully ascertained as monitoring systems and linkages still to be strengthened or developed.</p> <p>Based on estimates made by Moore (2006), out of the 80% water supply coverage only 76 % are having piped connections, On the other hand, Worldbank Report (2005) showed that the population with formal access to safe drinking water is around 79% distributed as follows: 44% with individual house connections, 10% with shared connections through communal faucets and 25% relying on shared point sources without distribution.</p> <p>The extension of coverage has not kept pace with the growing population in the last few decades. According to the Joint Monitoring Program (JMP) for Water Supply and Sanitation of UNICEF and WHO, access to an improved source of water supply actually decreased from 87% in 1990 to 85% in 2004.</p> <p>In order to address the MDG targets on access to potable water supply the Philippine Water Supply Roadmap was formulated that identified short and long term programs/plans. As regards to the availability of updated and validated information and baseline data on water supply coverage, a sector assessment study is currently being conducted.</p>	
2. Percentage of water deliver (cu.m) to customer meeting WHO guidelines for drinking water quality	
<p><u>Description</u> Information is not readily available.</p>	
3. Average hour of water supplied per day	Generally 18 – 24 hours
<p><u>Description</u> Currently there is no standard information on the number of hours the different water service providers are operating. It varies depending on the guidelines imposed by regulatory agencies and the condition of water service providers and sources of water supply.</p>	

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<p>For Metro Manila, served by the two private concessionaires (Maynilad and Manila Water) water is being supplied 24 hours a day or less depending on the area being served.</p> <p>In other urban areas, Water District's water is supply water for less than 24 hours a day.</p> <p>Private water service providers being regulated by the National Water Resources Board (NWRB), the water supply hour is only 8 hours however, actual operation could be less.</p>	
4. Per capita domestic water consumption	variable
<p><u>Description</u> In a 2004 sample of 45 water service providers, the NWRB found an average consumption of 118 l/d/c. The highest consumption was recorded in the East Zone of Metro Manila with 232 l/d/c.[26]</p>	
5. Percentage of water supply metered	
<p><u>Description</u> Generally, water supply by piped connections is metered. At this point, we don't have statistics of the percentage of water supply metered.</p>	
6. Percentage of UFW/NRW	Typically more than 20 %
<p><u>Description</u> In the Philippines the provision of basic water services is the responsibility of various institutions and the consolidation of information on NRW of these water service providers could take time.</p> <p>Available information shows that the estimated NRW of the two concessionaires tasked to serve Metro Manila ranges from 20% to 66%. On the other hand, for provincial urban water services Water Districts' average NRW is 26%.</p>	

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ISSUE 2 – IRRIGATION

Monitoring Indicators	Value
1. Percentage of irrigated area versus the total potential irrigable area	49% as of 2008
<p><u>Description</u> The government has undertaken the biggest reform initiative on the irrigation sector for the last 30 years. The government intensified its program on rehabilitation, repair and restoration of irrigation systems.</p> <p>The government through the National Irrigation Administration (NIA) is currently undertaking the following programs:</p> <ul style="list-style-type: none"> • Irrigation Sector Restructuring and Reform, to support the implementation of a rationalization plan for NIA and the strengthening of its institutional capacity to deliver efficient irrigation services; • Irrigation Infrastructure Development, to improve the delivery of irrigation services in at least 58 selected NISs through rehabilitation with modernization ; and • Project Management and Coordination, to provide support for an efficient coordination, implementation and management of the project, including strengthening the financial management and procurement functions and the establishment and operation of the monitoring and evaluation system for the project. <p>As of December 31, 2008, the total service area developed was 1,519,942 ha or 49% of the estimated potential irrigable area of 3,126,340 ha. Of this area, 748,593 ha are under NIS, 554,020 ha in CIS and 217,329 ha in private irrigation systems (PIS). The remaining potential area to be developed is still 1,607,073 ha. The estimated potential irrigable area those primarily devoted to rice and corn and up to 3% slope.</p>	
2. Percentage of irrigated area damaged by flood and drought	
<p><u>Description</u> Information is not readily available.</p>	
3. Percentage of irrigated area with water quantity measuring devices	
<p><u>Description</u> Information is not available</p>	

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ISSUE 3 – STORMWATER MANAGEMENT

(No Report)

Monitoring Indicators	Value
1. Any policy on managing stormwater (Yes/No)	
<u>Description</u>	
2. Any legislation on managing stormwater (Yes/No)	
<u>Description</u>	
3. Any regulatory agencies to control stormwater (Yes/No)	
<u>Description</u>	
4. Any formal institutional arrangements among related agencies to manage stormwater (Yes/No)	
<u>Description</u>	
5. Use of computer modelling tools to model stormwater quality and quantity (Yes/No)	
<u>Description</u>	
6. Availability of design manual/code of practices for stormwater management (Yes/No)	
<u>Description</u>	

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ISSUE 4 – FLOOD MANAGEMENT (No Report)

Monitoring Indicators	Value
1. Any steps taken to implement Integrated Flood Management (IFM) approaches in the country (Yes/No)	
<u>Description</u>	
2. Percentage of high risk flood-prone areas in the country covered by early flood warning and response systems	
<u>Description</u>	
3. Percentage of high risk flood-prone areas in the country covered by a real time flood monitoring information system	
<u>Description</u>	
4. Percentage of annual national budget allocated to flood management	
<u>Description</u>	
5. Any legislation on river conservation (Yes/No)	
<u>Description</u>	
6. Any formal institutional arrangements among related agencies to manage floods (Yes/No)	
<u>Description</u>	

ISSUE 5 – WATER POLLUTION MANAGEMENT

Monitoring Indicators	Value
1. Any policy on water pollution control (Yes/No)	Yes
<u>Description</u> The Clean Water Act enacted in 2004 and its IRR. The law pertains to water quality management in all water bodies and shall primarily apply to the abatement and control of pollution from land-based sources.	

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<p>Philippine Environmental Code 1977 (Waste Management provision) – established standards for air and water quality, and guidelines for land use, natural resources, groundwater and waste management.</p> <p>In addition, the DENR through the EMB have policies on water pollution control through the issuance of Department Administrative Order. Likewise, Laguna Lake Development Authority (LLDA) managing the Laguna Lake Basin has set of water pollution policies.</p>	
<p>2. Any specific legislation for the management of water quality and wastewater (Yes/No)</p>	<p>Yes</p>
<p><u>Description</u></p> <p>The Clean Water Act enacted in 2004 pertains to water quality management in all water bodies and shall primarily apply to the abatement and control of pollution from land-based sources.</p> <p>Philippine Environmental Code 1977 (Waste Management provision) – established standards for air and water quality, and guidelines for land use, natural resources, groundwater and waste management. It also provides management policy for the prevention, control and abatement of water pollution</p>	
<p>3. Any specific financial support programme for controlling water pollutions (Yes/No)</p>	<p>Yes</p>
<p><u>Description</u></p> <p>Generally funding for controlling water pollutions comes from the government. However, there are agencies like the Laguna Lake Development Authority (LLDA) that introduced market-based instrument such as the Environmental User Fee Systems (EUFS) to address environmental problems and generate revenue to help support environmental management programs.</p> <p>The LLDA launched the EUFS in January 1997 covering all enterprises within their jurisdiction that discharges wastewater in the Laguna de Bay system. The EUFS includes commercial/industrial establishments; agro-based industries/establishments (such as swine farms and slaughter houses); clustered dwelling (i.e. residential subdivisions) as well as domestic households. However, EUFS for households is still under development.</p> <p>Other market-based instruments similar to EUFS are already implemented in some areas which generate revenue for supporting environmental management programs.</p> <p>Likewise, the Clean Water Act of 2004 which provides the implementation of a wastewater charge system in all management areas including the Laguna Lake Region and Regional Industrial Centers through the collection of wastewater charges/fees. The system shall be established on the basis of payment to the government for discharging wastewater into the water bodies.</p>	

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The system is now being implemented in the Laguna Lake Region and other areas.	
4. Any formal institutional arrangements among related agencies to manage water pollution (Yes/No)	Yes
<p><u>Description</u> Under the Clean Water Act, Water Quality Management Area (WQMA) with governing board compose of multi-sectoral group will be designated. To date, one governing board was already established out of the three designated pilot WQMAs.</p>	
5. Any public/private sector partnership and participation in managing water pollution (Yes/No)	Yes
<p><u>Description</u></p> <p><i>Philippine Sanitation Alliance</i> The Alliance helps reduce water pollution and diseases. It is a public-private partnership that unites Philippine cities, private companies, business associations, government agencies, U.S. and international nongovernmental organizations and international agencies, including the World Bank Water and Sanitation Program.</p> <p>It aims to bring together the public and private sectors to achieve a common goal of protecting human and environmental health in the Philippines.</p>	
6. Any river water quality monitoring information system/database (Yes/No)	Yes
<p><u>Description</u> The Environment Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR) is continuously conducting regular water quality monitoring on classification of inland surface bodies. This classification are Class AA – waters intended as public water supply requiring only disinfection to meet the Philippine Standards for Drinking Water (PNSDW); Class A- waters suitable as water supply requiring conventional treatment to meet PNSDW; Class B- water intended for primary recreation; Class C- waters for fishery, recreation/boating and supply for manufacturing processes after treatment and Class D- waters intended for agriculture, irrigation, livestock, watering etc.</p> <p>Another water quality monitoring for selected surface water bodies is also being conducted by EMB covering parameters such as Dissolved Oxygen (DO); Biochemical Oxygen Demand (BDO); Total Suspended Solids (TSS); and Total Dissolved Solids (TDS).</p> <p>On the other hand, the LLDA is also conducting monitoring activities in the rivers that drain into Laguna de Bay. It is a vital component of the River Rehabilitation Program of the agency, the result of which are used to</p>	

Source: ASEAN Working Group for Water Resources Management (AWGWRM) – April 2015
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determine the effectivity of the program being implemented in correlation to improving the lakes water quality.	
7. Any river water quality master plan at national and local levels (Yes/No)	No
<u>Description</u>	
8. Any river basin master plan for relocating the highly polluting industries in a river basin (Yes/No)	No
<u>Description</u>	

ISSUE 6 – SANITATION MANAGEMENT

Monitoring Indicators	Value
1. Any policy on urban/rural sanitation and sewerage systems (Yes/No)	Yes
<u>Description</u> The following are the existing laws, policies, regulations on urban/rural sanitation and sewerage systems: <ol style="list-style-type: none"> 1. National Plumbing Code 1959 (wastewater provision) - Guidelines, criteria and standards for the design and construction of sanitation and sewerage facilities 2. Department of Health Circular, PD 522, IRR No 220 Series of 1974 - Sewage from house plumbing system shall be connected to a public sewerage system, if available, or to a septic tank. 3. Sanitation Code of the Philippines 1975- provides guidelines on sewerage collection and disposal, excreta disposal and drainage, with IRR 4. Philippine Environmental Code 1977 (Waste Management provision) – established standards for air and water quality, and guidelines for land use, natural resources, groundwater and waste management. 5. Local Government Code 1991 - Devolves provision of basic services and facilities to LGUs, including sanitation, sewerage and flood control. 6. National Policy on Urban Sewerage and Sanitation of 1994 (NEDA Board Resolution No. 5) – Giving high priority to improved urban sanitation and sewerage. Contains national policy, strategy and action plan for urban sewerage and sanitation 	

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<p>7. National Building Code 1997 and its IRR contains certain provisions on wastewater disposal and drainage. It requires the connection of new buildings to sewerage system.</p> <p>8. Clean Water Act 2004- contains provision on National Sewerage and Septage Management Program.</p>	
2. Any specific legislation on urban/rural sanitation and sewerage systems (Yes/No)	Yes
<p><u>Description</u></p> <p>1. Sanitation Code of the Philippines 1975- provides guidelines on sewerage collection and disposal, excreta disposal and drainage, with IRR</p> <p>2. National Plumbing Code 1959 (wastewater provision) - Guidelines, criteria and standards for the design and construction of sanitation and sewerage facilities</p>	
3. Percentage of annual budget for sanitation and sewerage programme/projects	3 % of the total annual average budget of the water and sanitation sector
<p><u>Description</u></p> <p>Based on the available data, a summary of investments made in the subsector since 1970 is estimated, assuming an allowance of about 25 percent for projects that were implemented by other government and private organizations (PTA's Sewerage for Boracay Environmental Infrastructure Project, projects implemented by land developers, NGOs, etc.). Investment in the sub-sector was estimated at P1.5 billion per year. This figure is 29 times less than the estimated P43.8 billion average annual investment for water supply projects. In other words, for every 97 pesos spent on water supply projects, only 3 pesos were spent on sanitation and sewerage projects.¹</p> <p>¹ PHILIPPINES: Water Supply and Sanitation Performance Enhancement Project</p>	
4. Any integrated national and provincial institutions to implement sanitation policies (Yes/No)	Yes
<p><u>Description</u></p> <p>The Department of Health (DOH) formulates policies and provides technical assistance to Local Government Units (LGUs) on sanitation and environmental health while the LGU enforce the Code on Sanitation of the Philippines and recent environment and health legislation and policies; and provides basic sanitation services.</p>	
5. Any private sector participation in providing sanitation services for the people (Yes/No)	Yes

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<p><u>Description</u></p> <p>(a) Encouraging private sector investment Republic Act No. 6957 of 1990 entitled “An Act Authorizing the Financing, Construction, Operation and Maintenance of Infrastructure Projects by the Private Sector and for Other Purposes,” manifested the government’s policy of greater private sector participation (PSP) in the provision of water and sanitation sector.</p> <p>(b) Example of Private Sector Participation Boracay’s Sewerage Facility Boracay is an island in Malay municipality renowned for its beaches that derives its main income from tourism. Triggered by the threat of pollution, the Philippine Tourism Authority (PTA) intervened and constructed a sewerage facility through a P100 million loan, payable in ten years, from Japanese aid agency OECF. The system was scheduled to be in service through a private operator by 2001. Legislation was passed allowing PTA to charge an Environmental Management Fee to visitors (P25 for foreigners, P10 for Philippine citizens). User fees will also be charged to business establishments and households. The sewerage system was planned to serve about 70 percent of the island’s population, as well as its main tourist areas.</p> <p>(c) Other Experiences Some developers of subdivisions, Export Processing Zones, and other land intended for tenancy are now incorporating sewerage systems as a component, particularly those targeting the high-income market. Operation and maintenance are either supplied by private operators through management contracts or provided in-house using specially trained staff. Tariffs (following the “polluter pays” principle) from all connected establishments are collected monthly to cover the amortization and operating costs of the sewerage system, which usually includes collection, treatment and disposal facilities. Examples of such private systems are found in Mactan Export Processing Zone, Philippine Export Processing Zone in Cavite, Ayala Center, and Ortigas Center.</p>	
6. Any national sanitation/sewerage information system/database (Yes/No)	No
<p><u>Description</u></p>	
7. Any comprehensive sewerage/sanitation master plan at national, regional and local levels (Yes/No)	Yes
<p><u>Description</u></p> <p>1988-2000 Water Supply, Sewerage and Sanitation Master Plan (WSSSMP): This plan emphasized the commitment of the national government to provide for the basic needs of the population, especially in depressed areas. WSSSMP was the result of an extensive interagency undertaking that involved DPWH, DILG, NEDA, MWSS, LWUA and NWRB. WSSSMP set the framework and agenda</p>	

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for organized, unified action by policy makers and program implementers, at all levels of the government, to execute and manage water supply, sewerage and sanitation programs and projects throughout the country. WSSSMP was also intended to serve as an example and reference for the private sector and non-government organizations actually or potentially involved in the development of the sub-sector.

1994 National Urban Sewerage and Sanitation Strategy Plan (NUSS). The purpose of the sanitation program was to create a more effective institutional framework to guide policy and institutional reforms; and to propose an appropriate development strategy and investment plan to improve sewerage and sanitation coverage nationally.

The Philippines' Clean Water Act, passed in 2004, requires the preparation of a National Sewerage and Septage Management Program (NSSMP) as part of the country's overarching National Sustainable Sanitation Plan. The NSSMP was envisioned to provide technology interventions and institutional and financial frameworks to guide local governments, water districts, and other project proponents through the process of developing infrastructure projects for managing wastewater in cities. Stakeholder consultation of the draft National Sewerage and Septage Management Program (NSSMP) is currently being undertaken.

8. Any effective regulatory framework to control the quality of wastewater discharges to water courses (Yes/No)	Yes
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Description

DENR DAO 34 and 35

In 1990, the DENR also issued DAO 34 and 35. DAO 35 regulates the discharge of industrial wastewater effluents, while DAO 34 classifies bodies of water according to their beneficial uses. Together, DAOs 34 and 35 regulate the discharge of wastewater effluents into varying water bodies.

Discharge Permits provided by the Clean Water Act

The DENR requires owners or operators of facilities that discharge regulated effluents pursuant to the Clean Water Act to secure a permit to discharge (DAO 2004-25). The discharge permit specifies the quantity and quality of effluent that said facilities are allowed to discharge into a particular water body, compliance schedules and monitoring requirements. A self-monitoring report of the company should also be submitted to the EMB. As part of the permitting procedure, the DENR encourages the adoption of waste minimization and waste treatment technologies when such technologies are cost effective. Effluent trading may be allowed per management area.

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9. Any land use master plan for relocating the highly polluting industries in a river basin (Yes/No)	No
<u>Description</u>	
10. Any awareness/advocacy programme for stakeholders on the importance of proper sanitation and sewerage systems (Yes/No)	Yes
<u>Description</u>	
<p><i>Manila Declaration gains Government's Commitment on Advancing Sustainable Sanitation</i> (<i>Philippine Sanitation Summit 2006: A Call for Improved Access to Sustainable Sanitation</i>)</p> <p>Representatives from the national executive and legislative agencies, local governments, non-government organizations, and other external support agencies shared their commitments and resources and responsive partnership for an improved access to sustainable sanitation in the Manila Declaration on the Advancement of Sustainable Sanitation and Waste-water Management in the Philippines</p> <p>DENR Secretary Angelo Reyes, Health Secretary Francisco Duque III, Misamis Oriental Rep. Augusto Baculio, and NWRB Executive Director Ramon Alikpala led the signing of the Manila Declaration to accelerate the implementation of the Philippine Clean Water Act of 2004, marking the highlight of the Philippine Sanitation Summit 2006 held last July 5-6 at the Heritage Hotel, Manila.</p> <p><i>Training for NGO's on ecological sanitation in Rural and Peri-urban areas in the Visayas and Mindanao</i></p> <p>The DILG-GTZ Water & Sanitation Program conducted for the first time training on ecological sanitation for local NGO's from the Visayas and Mindanao. The 3-day training took place in Dumaguete and Bayawan City , Oriental Negros from April 24 to 26, 2007.</p> <p>It aims at promoting ecological sanitation not only to its partners but to all stakeholders. NGO's play an important role in planning and implementing water and sanitation projects.</p>	