

NATIONAL REPORT ON IHP RELATED ACTIVITIES

PHILIPPINES

25TH REGIONAL STEERING COMMITTEE MEETING
UNESCO INTERNATIONAL HYDROLOGICAL PROGRAMME
FOR SOUTHEAST ASIA AND THE PACIFIC

QUEZON CITY, METRO MANILA
13 NOVEMBER 2017

Philippine National Committee (Members)

1. Bureau of Soils and Water Management (BSWM), Department of Agriculture (DA)
2. Bureau of Research and Standards (BRS), Department of Public Works and Highways (DPWH)
3. Environmental Management Bureau (EMB), Department of the Environment and Natural Resources (DENR)
4. Flood Control & Sabo Engineering Center (FCSEC), Department of Public Works and Highways (DPWH)
5. Laguna Lake Development Authority (LLDA)
6. Local Water Utilities Administration (LWUA)
7. LPA & Associates (private sector)
8. Metropolitan Waterworks and Sewerage System (MWSS)
9. Mines and Geoscience Bureau (MGB), Department of the Environment and Natural Resources (DENR)
10. National Economic and Development Authority (NEDA)
11. National Hydraulic Research Center, University of the Philippines (UP-NHRC)
12. National Irrigation Administration (NIA)
13. National Mapping and Resource Information Authority (NAMRIA)
14. National Power Corporation (NPC)
15. National Water Resources Board (NWRB)
16. Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Department of Science and Technology (DOST)
17. Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Department of Science and Technology (DOST)
18. Philippine Water Partnership (PWP)
19. Mapua Institute of Technology, School of Civil Engineering, Manila
20. University of Santo Tomas (UST), Department of Civil Engineering (UST), Manila
21. University of the Philippines at Los Baños (UPLB), College of Engineering and Agro-Industrial Technology (UPLB-CEAT), Los Baños, Laguna
22. Ateneo De Manila University (ADMU) - Manila Observatory, Quezon City
23. Central Luzon State University (CLSU), Muñoz, Nueva Ecija
24. De La Salle University (DLSU), Department of Civil Engineering (DLSU), Manila
25. University of San Carlos (USC), Department of Civil Engineering & Water Resources Research Center (USC), Cebu City

Highlights of Activities of Most Active of Philippine National Committee Members

Philippine Water Partnership (PWP)

- Activities in 2017 with the following Goals:
 - **Strategic Goal 1** - Catalyze change in policy and practice
 - Understanding Water and Food Nexus to Improve Water Security: The Philippine Context to Incorporate water security in their IWRM and climate change-related policies and plans
 - **Strategic Goal 2** - Generate and Communicate knowledge
 - Information, Education and Communication (IEC) campaign on water security for Stakeholders to gain improved political awareness and commitment to deliver water security with demonstrable follow-up commitments and actions.

National Water Resources Board

Reservoir operations studies of Ambuklao, Binga and San Roque of the Upper Agno River Basin (January 2016-July 2017): Involves optimization-simulation model development, optimization-simulation studies with 50 years historical data and with rescaled historical data under 2050 climate change scenario, and, finally development of reservoir operation rule curves based on these optimization-simulation studies.

Assessment and establishment of new streamflow monitoring system in the Upper Agno River and Angat River basin (2016-2017): Components of this project include sampling network design based on sampling error variance and capital and maintenance costs, and the establishment of new or revision of location of old stations based on the assessment of sampling network design.

Metropolitan Waterworks and Sewerage System (MWSS)

Water Supply Projects

- **New Centennial Water Supply Project 2013 - 2017** Public-Private Partnership (PPP)
Construction of a new water source in order to meet the increasing water demand.
Also intended to provide a redundant dam for Metro Manila's domestic water supply.
- **Bulacan Bulk Water Supply Project 2014 -2017** PPP
Construction of water distribution system that will provide bulk water supply to the water districts of the Province of Bulacan

Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA):

Continuing Priority Programs of the Flood Forecasting Branch, (ii) Calibration of the following hydrologic models, to be applied operationally to the various flood forecasting points of the Pampanga, Agno, Bicol and Cagayan River Basins, (iii) Establishment/Enhancement of Community-based Early Warning System, (iv) Conduct of flood hazard mapping, (v) strengthening of the FFWS for dam operation.

Department of Public Works and Highways (DPWH):

Project for Enhancement for Urban Resilient to Climate Change Projects

- Formulation of river basin flood mitigation master plans to flexibly cope with the potential impacts of future climate changes:
- structural measures resilient to climate change
- measures not to cause any casualties, even in the event exceeding the design flood
- Strengthen non-structural measures for climate change
- Strengthen monitoring system for rainfall intensities, river water level, tidal levels and other hydrological factors related to the climate changes
- Promotion of Rainwater Harvesting
- Retarding basins or ponds for flood control
- Rainwater collector systems in public school buildings for water supply and flood control
- Construction of Evacuation Centers

Department of Interior and Local Government (DILG)

Current Initiatives & Programs

- MDGF-Enhancing Access to & Provision of Water Services with the Active Participation of the Poor

aims to enhance the provision of and access to water services in 36 waterless communities through

a combination of improved policy environment and increases local capacities.

(a Joint Program of the Government and the United Nations, with funding from the Spanish government under the MDG Achievement Fund Strategies works with local governments and communities empowers the vulnerable and disadvantaged inspires commitment, support and partnerships)

- Sound Practices and Knowledge Products

Human rights-based approach to WATSAN development planning.

Godparent scheme for knowledge and skills transfer

Localized customer service code for Level II systems

Fact sheets, Publications, Brochures

Local Water Governance Toolbox - Physical and Web-based Knowledge Products

University of the Philippines - Diliman, Institute of Civil Engineering (UP-ICE) and National Hydraulic Research Center (NHRC)

San Juan River Basin, Quezon City Flood Control Project (Dr. Roberto Soriano, principal investigator): Components include hydrologic and flood inundation modeling to assess alternative flood mitigation works in Quezon City along San Juan River.

Laguna Water Supply Masterplan from Surface and Groundwater Sources (Dr. Guillermo Q. Tabios III, principal investigator) November 2016-October 2017.

Assessment Study of Water Quality and Pollution of Rivers in Northern Luzon such as assessment of heavy metal contamination in sediments due to small-scale mining and ecological risk assessment of heavy metals in river sediments and soils around the rivers.

Water Resources Technology Training programs for various agencies

Major Meetings hosted by the country

2nd International Conference on Climate Change Research and Development and 6th National Climate Research Conference, School of Environmental Science and Management of the University of the Philippines, Los Banos and National Academy of Science and Technology, Los Banos, September 27-28, 2017.

25th Regional Steering Committee of UNESCO-IHP Southeast and Pacific (SEAP) and Joint UNESCO-JASTIP Symposium on “Intraregional Water Security and Disaster Management”, Quezon City, Metro Manila, November 13-16, 2017.

International Network for Water and Ecosystem in Paddy Fields, 14th INWEPF Symposium and Steering Committee, Theme: “Strengthening Global Partnership for Sustainable and Climate Resilient Irrigation and Drainage Systems in Paddy Fields”, Chaired by National Irrigation Administration, Clark Special Economic Zone Angeles City, Pantabangan, Nueva Ecija & Banaue, Philippines, 21-24 November 2017.

Last Slide. Thank you very much.