



FACE
Project



Enhancing Resiliency through Community Participatory Flood Observation System for the Laguna Lake Basin

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Countries most vulnerable to climate change:

1. Vanuatu
2. Tonga
- 3. The Philippines**
4. The Solomon Islands
5. Guatemala
6. Bangladesh
7. Timor-Leste
8. Costa Rica
9. Cambodia
10. El Salvador

As reported by the United Nations University's Institute for Environment and Human Security and the German Alliance Development Works

SUPER TYPHOON YOLANDA (HAIYAN), November 2013

Death toll : 6193

Injured : 28,689

Missing : 1061

Damage: 89 Billion Pesos (2 Billion USD)

(Official data from the National Disaster Risk Reduction Management Council)



Flooding during and after Typhoon *Ondoy* (Ketsana) in the Metro Manila area, September 2009

Death toll : 464

Injured : 529

Missing : 37

Damage: 11 Billion Pesos (250 million USD)

(Official data from the National Disaster Risk Reduction Management Council)



(Manda, 2009)

NATIONWIDE OPERATIONAL ASSESSMENT OF HAZARDS (NOAH)

Project NOAH

Launched by the Department of Science and Technology (DOST) in 2012 as a response to the following instructions of President Aquino:

- ❖ to put in place a responsive program for disaster prevention and mitigation
- ❖ to be able to provide a 6 hour lead-time warning to vulnerable communities against impending floods
- ❖ to use advanced technology to enhance current geo-hazard vulnerability maps

Priority areas are the 18 Major River Basins

The Project Team is composed of academics, researchers, planners, government and private agencies, Non-government organizations. It is based at the Institute for Geological Sciences of the University of the Philippines in Diliman, Quezon City.

Nationwide Operational Assessment of Hazards (NOAH)

The screenshot displays the DOST - Project NOAH website interface. At the top, there is a navigation bar with the following elements: the DOST logo and 'DOST - Project NOAH' text; a 'YOLANDA SPECIAL' button; and buttons for 'DOWNLOADS', 'TOOLS', 'LEGEND', 'BLOG', 'ABOUT', 'HELP', and 'REPORT A FLOOD'. Below this is a search bar with the placeholder text 'Magpasok ng lokasyon'. A series of dropdown menus are labeled 'OVERVIEW', 'WEATHER OUTLOOK', 'DOPPLER', 'WEATHER STATIONS', 'FLOOD MAP', and 'HEALTH', each with a 'Select layer' option. The main content area features a map of the Philippines with various geographical labels such as 'Luzon', 'Maynila', 'Dasmariñas', 'Panay', 'Iloilo', 'Lungsod ng Bacolod', 'Lungsod ng Cebu', 'Mindanao', and 'Cagayan de Oro'. The map includes a compass rose, a zoom slider, and map style options for 'Street', 'Terrain', and 'Hybrid'. A sidebar on the right contains a list of news updates from Twitter, including a thunderstorm advisory for Borongan and rainfall advisories for Samar and Visayas. At the bottom, a status bar shows 'Rainfall intensity as of 07/02/14 01:20 PM' and specific rainfall data for 'Guimaras, Buenavista Municipal Hall : 2.032 mm/hour' and 'Iloilo, West Visayas State University : 3.302 mm/hour'. The Google logo is visible in the bottom left corner, and a copyright notice for 2014 is in the bottom right.

COMPONENTS OF PROJECT NOAH

1. Distribution of Hydro-meteorological Devices in hard-hit areas in the Philippines (Hydromet)
2. Disaster Risk Exposure Assessment for Mitigation – Light Detection and Ranging (DREAM-LIDAR Project)
3. Flood Information Network Project or Flood NET
4. Weather Hazard Information Project
 - a. Strategic Communication Intervention
 - b. Disaster Management Using WebGIS
5. Enhancing Geo-hazards Mapping through LIDAR
6. Local Development of Doppler Radar Systems (LaDDers)
7. Landslide Sensors Development Project
8. Coastal Hazards and Storm Surge Assessment and Mitigation (CHASSAM)
9. Weather Information – Integration for System Enhancement (WISE)

HUMAN RESOURCE DEVELOPMENT PLAN FOR NATURAL DISASTER PREVENTION

HAZARDS MAPPING AND ASSESSMENT FOR EFFECTIVE COMMUNITY BASED DISASTER RISK MANAGEMENT (READY PROJECT)

The READY Project is a collaborative effort of the Government of the Republic of the Philippines, the United Nations Development Program (UNDP) and the Government of Australia Australian Aid (AusAID)

BUILDING COMMUNITY RESILIENCE AND STRENGTHENING LOCAL CAPACITIES FOR RECOVERY AND DISASTER RISK MANAGEMENT (RESILIENCE PROJECT)

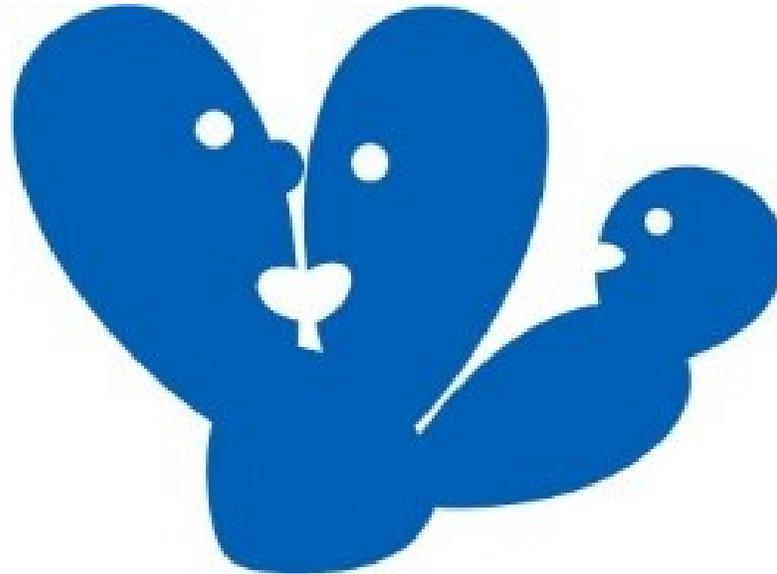
Office of Civil Defense (OCD), the Local Governments Units of Marikina City, Pasig City and Cainta Rizal, Collective Strengthening of Community Awareness on Natural Disasters (CSCAND) agencies

LOCAL FLOOD EARLY WARNING SYSTEM (LFEWS)

LFEWS evolved from the Community-Based Flood Early Warning System (CBFEWS) of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) in connection with the READY Project.

A Simple and Community Friendly Independent Floods Observation System for the Laguna Lake District and National Capital Region in the Republic of the Philippines

**Flood Awareness and Community Empowerment
(FACE) Project**



Project period: October 2013 to September 2016

Budget: 56,000,000 JPY (JICA Technical Cooperation for Grassroots Project)

Overall Goal

To mitigate flood damage in the Laguna Lake Basin and enhance the resiliency of communities through participatory flood observation system, which can contribute to sustainable economic development in the target areas.

Main Objective

To capacitate the Disaster Risk Reduction Management Officers and the respective communities in the project sites through the installation and operation of a simple community-based flood observation system and to manage the information generated by the system (enhance the use of disaster information by the local people).

Philippines

PAGASA

DPWH-Flood
Control

OCD

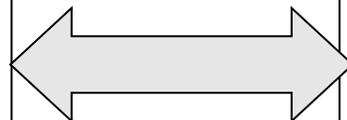
Laguna Lake
Development
Authority (LLDA)

LGU
Urbanized
area:
Santa Rosa
Calamba

LGU
Non
urbanized
area
Angono



UPLB



Japan

E-trust Co., Ltd
Web camera systemト

Nagaoka City

Ritsumeikan University

Tokyo University

Unimation Inc.
Orbital Engineering

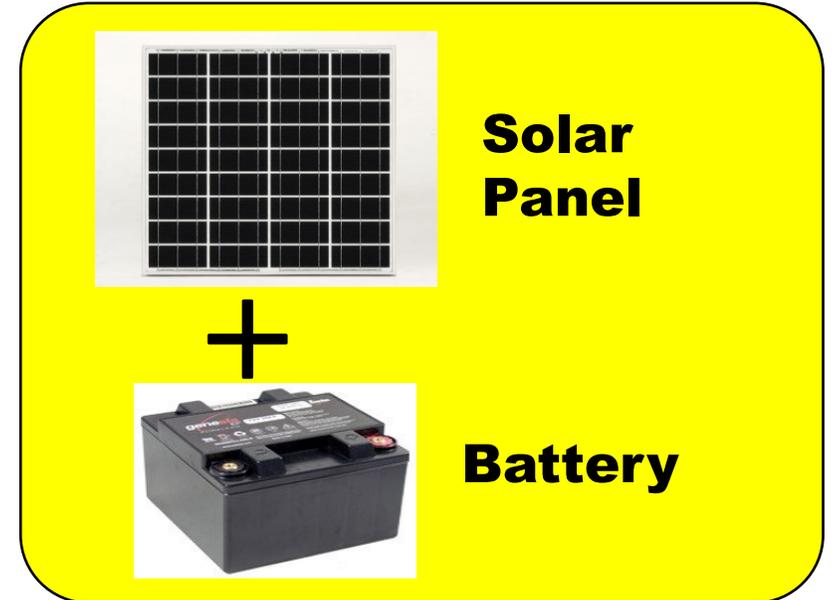
**The Research Institute for
Humanity and Nature (RIHN)**

JICA Partnership Program

- **Activities in the pipeline:**

- Installation of additional web-camera flood observation system
- Capacity building activities for the DRRM Officers and communities , which include training on the operation and maintenance of the flood observation system, problem mapping exercises
- Conduct of socio-economic survey
- Development of a flood risk management program
- Sharing of the gains of the project to other Local Government Units and hopefully, to our ASEAN neighbors

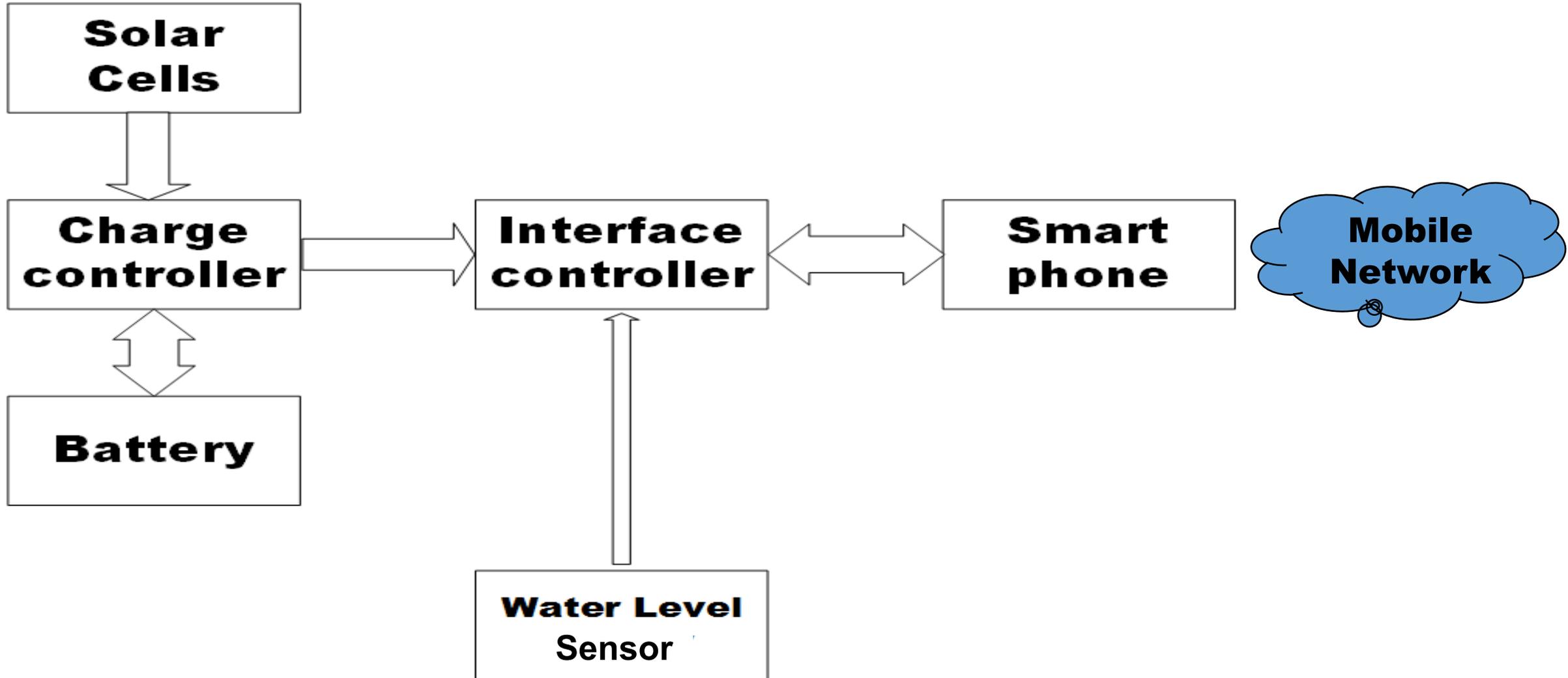
Simple web camera system for flood observation and monitoring



Reduced cost compared to the standard type of web camera

This section is contained within a white rounded rectangle with a black border. On the left, there is a brown money bag icon with the letters "PHP" written on it. To the right of the icon, the text "Reduced cost compared to the standard type of web camera" is written in bold.

Simple Web Camera circuit diagram



Rizal Province



Laguna Province



MARKETING OF THE PROJECT; MEMORANDUM OF UNDERSTANDING WITH THE LOCAL GOVERNMENT



Installation of monitoring equipment



Typhoon Glenda, 16 July 2014



Image of Angono River at 9:05 am



Image of Angono River at 2:05 pm

Intensive Rain in Calamba City, 24 December 2014



Image of San Juan River at 7:01 am

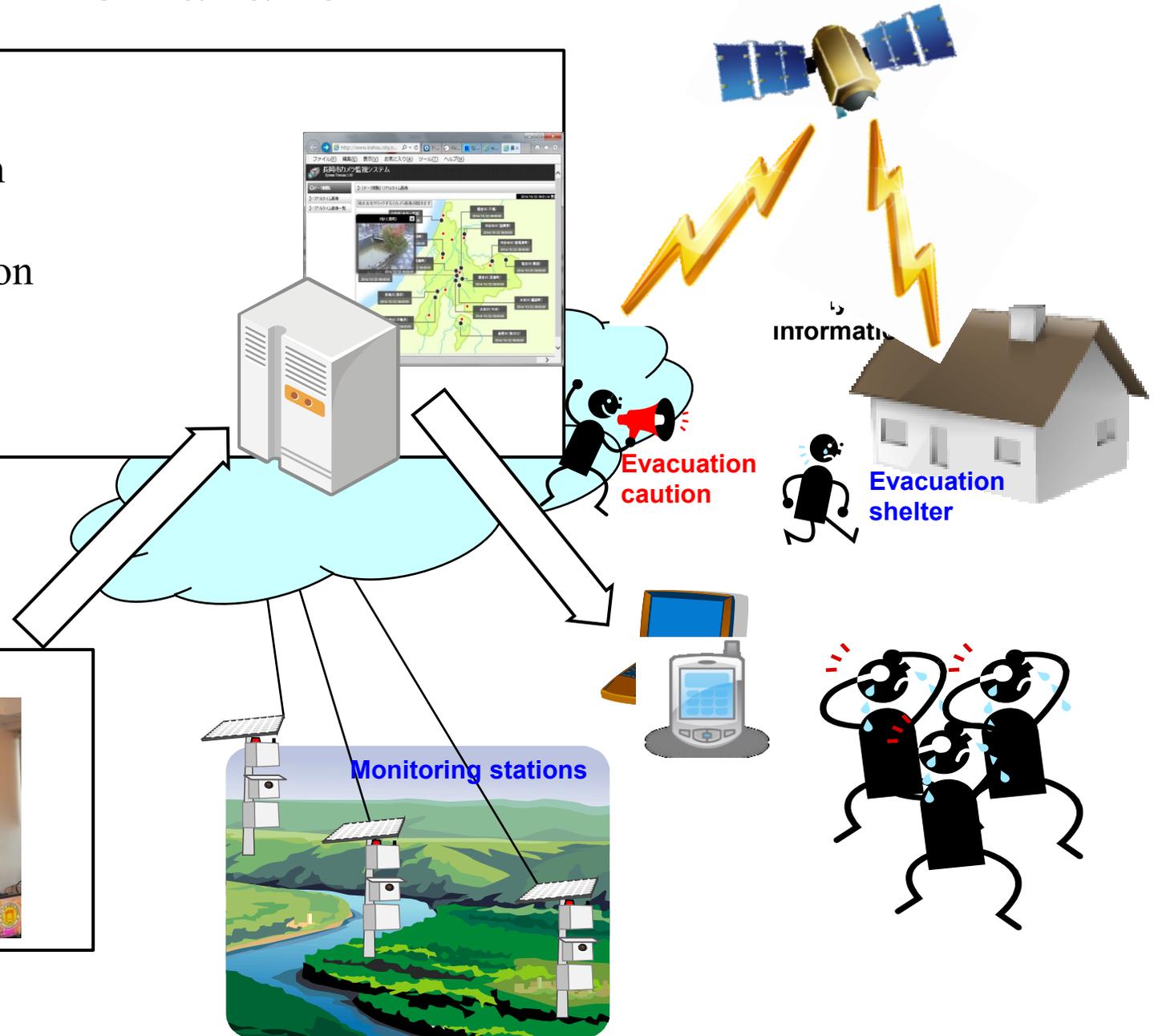


Image of San Juan River at 14:05 pm

Landscape, Ideas for the future

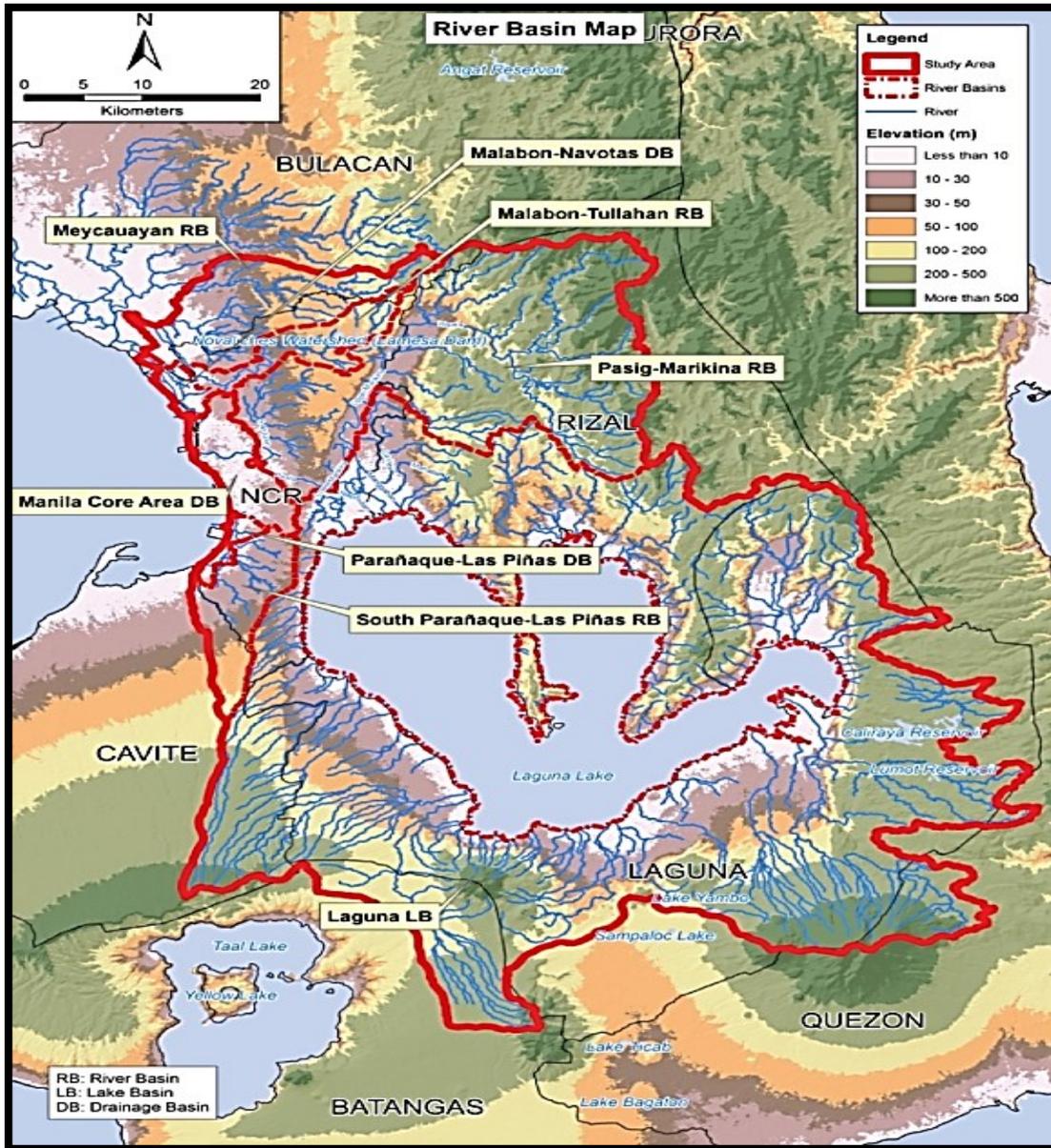
Disaster Information Portal

- Integrate disaster related information
- Help the control center to manage the situation and the information
- Provide the communities with safety information



Disaster & Risk Control Center





The FACE Project is complementary to the Metro Manila Flood Management Master Plan* that establishes the road map for sustainable and effective Flood Risk Management in Metro Manila and Surrounding areas.

***Principal implementor is the Department of Public Works and Highways (DPWH)**

"Maraming Salamat Po!"

THANK YOU VERY MUCH!

