



# KEY PHILIPPINE STRATEGIES

## Best Climate and Disaster Risk Management Practices

***"DEFYING DISASTERS:  
A Tri-continental South-South  
Dialogue"***  
**5 Dec 2012, COP 18, Doha, Qatar**

# Monsoon Floods of “Typhoon Habagat”

- 8-days of intense rain and thunder storms in NCR (Aug. 1-8, 2012)
- Cause: The pull of Typhoon Saola (*Gener*) enhanced by Typhoon Haiku caused a strong movement of the SW Monsoon (***Habagat***)
- **Damage:** the heaviest since Sept. 2009 (Typhoon Ketsana or *Ondoy*) with 51 dead and at least 519,999 persons affected and more than 17,500 in evacuation centers; **P404M** (US\$9.6M)

- **Philippine Disaster Risk Reduction and Management (PDRRM) Law of 2010**
  - > **Created National, Regional and Local DRRM Councils**
  - > **Allowed use of Calamity Fund, or pre-assigned LGU response allocation, for preparedness**
  - > **Required national and local contingency and action planning**

**Philippine Policies & Institutions**

- **CLIMATE CHANGE ACT of 2010**

- > **Climate Change Commission**

- > **LGU-led local adaptation and mitigation**

- > **Mainstreaming of climate change concerns or “*climate-proofing*” of all policies, plans and programs of government (*National Framework Strategy, National Action Plan*)**

- > **People’s Survival Fund**

**Philippine Policies and Institutions**

- PASIG-MARIKINA-LAGUNA RIVER BASINS
- CAGAYAN RIVER BASIN

**CASE STUDIES IN RIVER BASIN  
MANAGEMENT STRATEGY**

- **Overflow of La Mesa Dam, Tullahan, Marikina and Pasig Rivers, Manggahan Floodway, Laguna de Bay caused up to 3m. (9.8ft.) flooding**
- **Flooded 70% of Metro Manila, esp. Quezon, Manila, San Juan, Pasig, Taguig, San Pablo, and Calamba cities**
- **Damage: P605.63M**  
**89 persons dead and 7 missing**  
**8,428 homes destroyed, 6,706 damaged**

## **Case Study #1: PASIG-MARIKINA-LAGUNA RIVER BASINS (Greater Manila Area)**

- **The Philippines: Locus of typhoons, earthquakes and volcanic eruptions, “Hotbed of Disasters”**
- **Continued lowland development and growing populations without DRR = rising damage and human loss**
- **NOAH Project: popularizes the use of cutting edge technologies and innovative information services in DRR through S&T partnerships**

**NATIONWIDE OPERATIONAL ASSESSMENT OF  
HAZARDS (NOAH) PROJECT – DOST, 2011-14)**

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Section: Nationwide Operational Assessment of Hazards

Buttons: TOOLS, LEGEND, ABOUT

SEARCH: Marikina City, Metro Manila

WEATHER OUTLOOK: Probability of Rain

FLOOD MAP: Ondoy Flood Map

WEATHER STATIONS: Select layer

DOPPLER: Select layer

SATELLITE: Select layer

Map controls: Street, Terrain, Hybrid

Map data: ©2012 Google - Terms of Use




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**Quezon City, Metro Manila**

**Probability of Rain**

	in 1 hour:	53.0 percent
	in 3 hours:	15.0 percent
	in 6 hours:	15.0 percent

Last checked: 07:09 June 18, 2012

**NOAH WEBPAGE – PROBABILITY OF RAIN**

- **Hydromet Sensors Development**
- **DREAM-LIDAR 3-D Mapping Project**
- **Flood NET-Flood Modeling Project**
- **Hazards Information Media**
- **Enhancing Geo-hazards Mapping through LIDAR**
- **Doppler System Development**
- **Landslide Sensors Development Project**
- **Storm Surge Inundation Mapping Project**

**NOAH COMPONENT PROJECTS**

- **March 2012 (Marikina Watershed Pilot):**

**Provided online streaming data from the automated rain gauges and water level sensors, flood hazard maps overlain on Google Maps, graphical satellite radar and Doppler data forecasts, and translated rain intensity and volume measurements in terms of warning and evacuation level alarms, hours or days ahead of the flood event**

- **2014:**

**Provide high-resolution flood hazard maps and install 600 automated rain gauges and 400 water level measuring stations for 18 major river basins of the Philippines**

**NOAH TARGETS**

- **READY PROJECT (National) – NDRRMC (2006-2013)**
- ***READY for GMMA Project: “Enhancing Risk Analysis Capacities for Flood, Typhoon, Severe Wind and Earthquake for Greater Metro Manila Area” (2011-present)***

**Hazards Mapping & Assessment for Effective Community-based DRM (READY) PROJECT**

# **OBJECTIVES OF READY PROJECT**

- **Assessment of vulnerabilities**
- **Development and implementation of priority disaster/climate risk mitigation actions**
- **Enhancing competencies of GMMA LGUs & partners to mainstream DRM/CRM into local planning and regulatory processes**
- **Demonstration of mainstreaming into local land use/development plan**
- **Establishment of KM system and vigorous Community of Practice**

- **The most effective strategies offer development benefits in the relatively near term and reduce vulnerability over the longer term.**

***From IPCC SREX SPM, 2011***

**Smart Islands Strategy**

- **RENEWABLE ISLAND ENERGY SYSTEMS:**  
**Wind, Solar, Hydro Power Generation Systems**
- **ENERGY CONSERVATION INITIATIVES FOR URBAN AREAS:**  
**Green Building**  
**Green Transport**

**Smart Islands Strategy**

- **Objective:**  
**Advocacy for the inclusion of black carbon as a greenhouse gas**
- **Project:**  
**GREEN JEEPNEYS**

**Philippine Carbon War Room**



**Private sector to invest Php 26B to  
clean Metro of black soot**

*Philippine Carbon War Room*