
The Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS



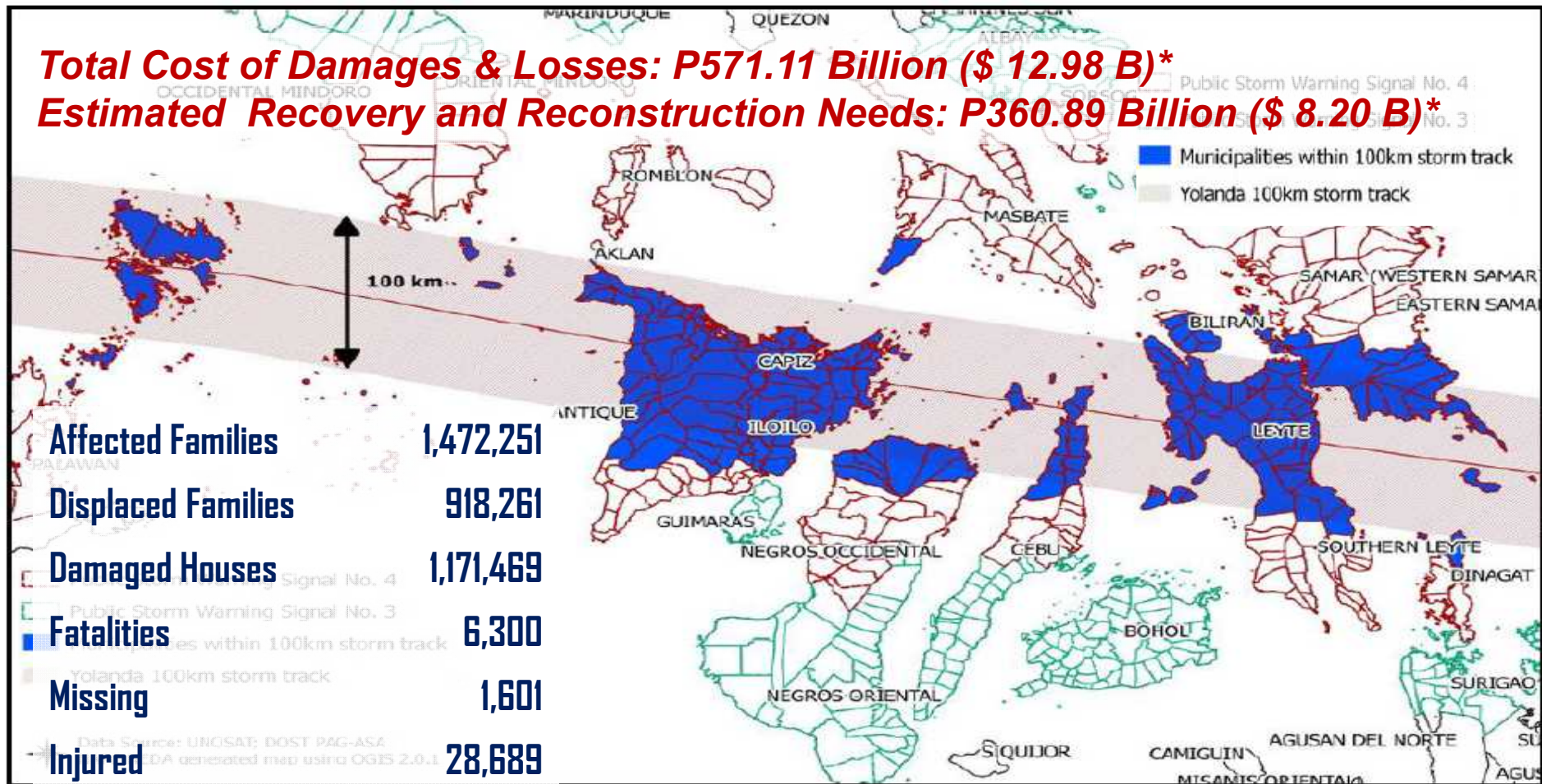
TYPHOON YOLANDA (HAIYAN) REHABILITATION AND RECOVERY

Secretary ROGELIO L. SINGSON

“Towards Mitigating Loss Caused by Mega-Disasters”
Tohoku University Centennial Hall, Sendai, Japan
15 March 2015



Effects of Super Typhoon Haiyan (Yolanda) – November 2013



* Based on Reconstruction Assistance on Yolanda (RAY), Report as of December 16, 2013

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Effects of Super Typhoon Haiyan (Yolanda) – November 2013

**Tacloban City
Before**



**Tacloban City
After**





Effects of Super Typhoon Haiyan (Yolanda) – November 2013

**Tacloban City
Before**



**Tacloban City
After**



Pre-Disaster Demographics of the Six (6) Affected Regions (Haiyan)



29.5 million in 2012
(combined population)



Data in 2012 show that the **average household income** in the severely affected provinces was only **75%** of the national average.



17.4 % of the country's
GDP in 2012



Enrolment rate was generally high, with most near or above the national enrolment rate of 91.2 %.

The affected regions account for 26.8% of the total agricultural output, 16.7% of industry, and 15.8% of services in 2012



Malnutrition rate was high

Source: RAY, 16 December 2013

Comprehensive Rehabilitation and Recovery Plan (CRRP)

CRRP Total Funding Requirement: P 167.86 Billion (\$ 3.82 B)*

Infrastructure
P 35.15 Billion
(\$ 0.80 B)

- ❖ Rebuild/repair damaged roads, bridges, airports, ports, school buildings, municipal halls, public markets, health facilities, water supply, sanitation, power utilities and other public facilities with affordable disaster-resilient standards.

Resettlement
P 75.68 Billion
(\$ 1.72 B)

- ❖ Construction of 205,128 disaster-resilient housing units including provision for sustainable livelihood opportunities in new settlement sites

Livelihood
P 30.63 Billion
(\$ 0.70 B)

- ❖ Emergency Employment & Livelihood Assistance; Clearing of farmlands; Provision of inputs (seeds, fertilizers, fishing gears); assets (work animals, fishing boats); Transition to labor market programs; skills development

Social Services
P 26.41 Billion
(\$ 0.60 B)

- ❖ Cash for work; financial/shelter/food assistance; college scholarship grants; supplemental feeding to students including learning kits; Health services and medicines; insurance subsidy to farmers; construction material assistance

Lessons Learned:



I. Build Back Better Policy

- Need for Structural Measures (More Resilient & Better Designed Structures)
- Lack of Non-Structural Measures (Early Warning, Policy Changes, Community Awareness)
- Need for capacity building of NGAs & LGUs
- Inadequate resilient public infrastructure facilities for emergency situations

II. Strategic Policies

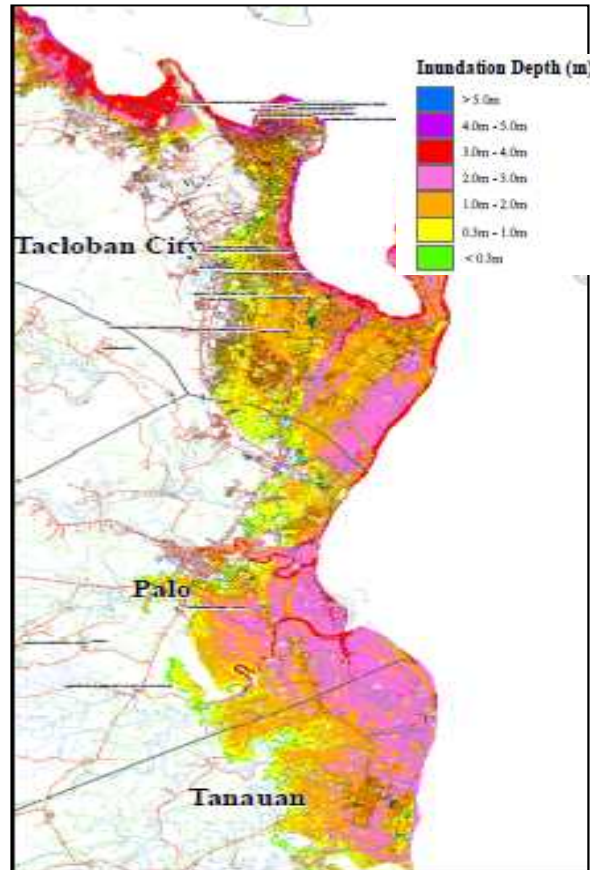
- Created cabinet level Climate Change Commission
- Adoption of Integrated Water Resource Management (IWRM) principles
- Implement River Basin Approach to Flood Management and Water Optimization

III. Disaster Risk Reduction Management (DRRM) Structure

- Permanent fully staffed Disaster Risk Reduction Management Office
- Better coordination with Humanitarian Organizations (UN, WB, JICA, ADB, Red Cross, etc.)

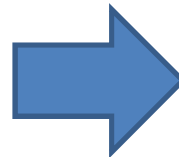


Tacloban-Palo-Tanauan Road Dike Project Reduction of Inundation Area

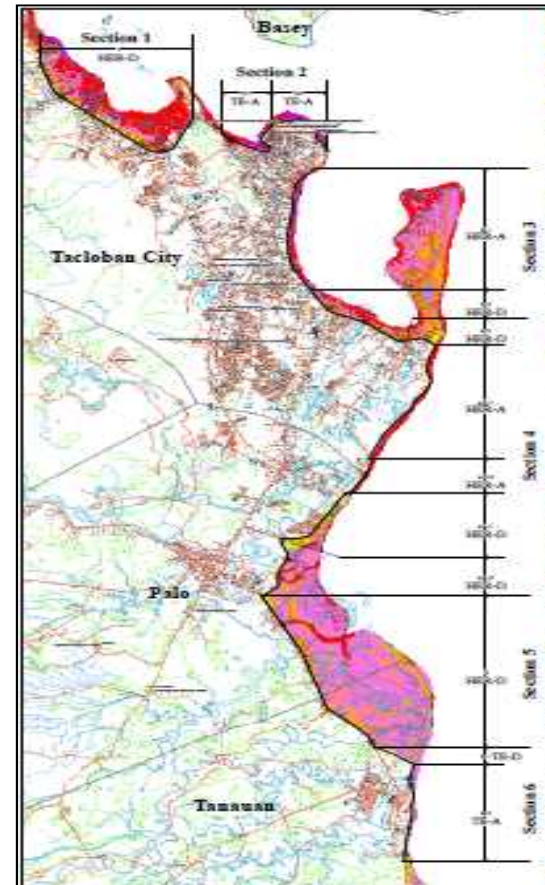


50 yr. return
period

30,812
houses/buildings
will be protected.



Area of 28.7 km²
protected.



Return Period	Number of Houses/Buildings Protected	Area Protected
50 year	<u>No. of Submerged Houses/Buildings</u> Existing Condition: 30,812 With Project: - Difference (No. Protected): 30,812	<u>Inundation Area</u> Existing Condition: 28.72 sq.km. With Project: - sq.km. Difference (Area Protected): 28.72 sq. km.



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LAGUNA LAKESHORE EXPRESSWAY DIKE (LLED)



PROJECT DESCRIPTION:

- 47 kilometers of 6-lane expressway dike with two (2) sections as follows:
 - Bicutan-Calamba
 - Calamba-Los Baños
- 700 hectares Rawland Reclamation and Horizontal Development Component, intended for mixed land uses.

PROJECT OBJECTIVE:

- To provide a high standard highway cum dike that will facilitate traffic flow and mitigate flooding in the western coastal communities along Laguna Lake, from Bicutan/Taguig in Metro Manila through Calamba to Los Baños in Laguna.

ESTIMATED COST:

- Expressway Dike-P 64.9 Billion (\$1.5B)
- Reclamation-P 57.9 Billion (\$1.3B)
- Total-P122.8 Billion (\$ 2.8B)

TARGET TIMELINES:

- 2015-2021



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THANK YOU !!!

