



**Asia-Pacific
Economic Cooperation**

2017/SOM1/EPWG/022

Agenda Item: 7.2.3

Disaster Risk Reduction in New Normal: The Philippine Experience

Purpose: Information
Submitted by: Philippines



**11th Emergency Preparedness Working Group
Meeting
Nha Trang, Viet Nam
18-19 February 2017**



DISASTER RISK REDUCTION (DRR) in New Normal: THE PHILIPPINE EXPERIENCE

11th Emergency Preparedness Working Group Meeting
18 – 19 February 2017
Nha Trang, Viet Nam

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Officer-in-Charge , Policy Development and Planning Service
Office of Civil Defense
National Disaster Risk Reduction and Management Council
PHILIPPINES

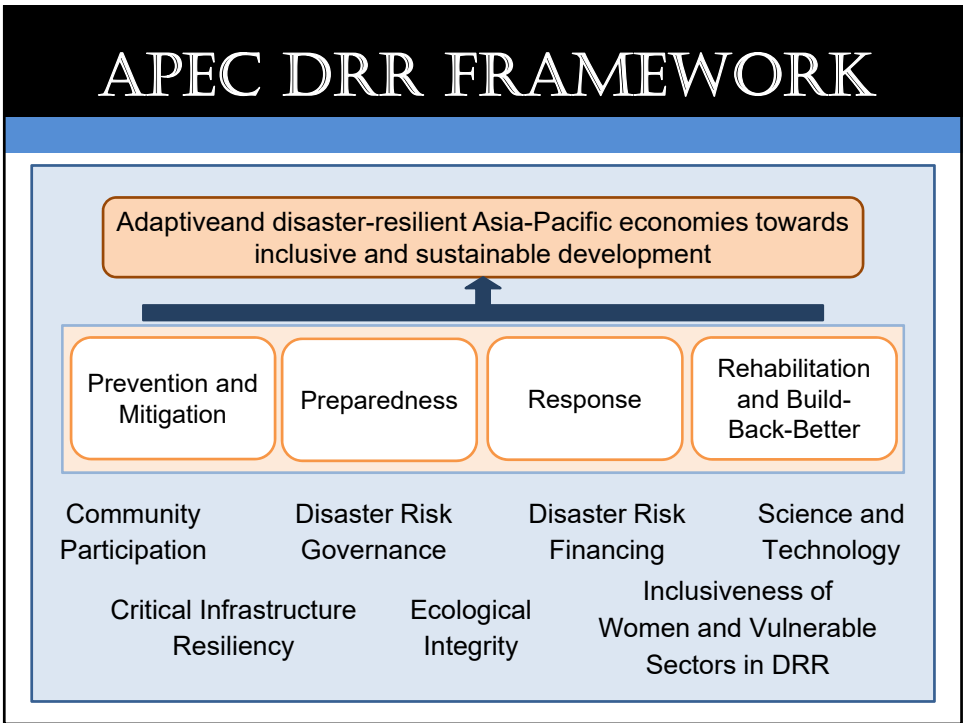
SCOPE OF PRESENTATION

- I. Brief on APEC DRR Framework
- II. DRR in New Normal
- III. Philippine Innovation in “New Normal”
- IV. Conclusion

APEC DRR FRAMEWORK

An APEC initiative that aims to harmonize all DRR efforts in the Asia-Pacific Region

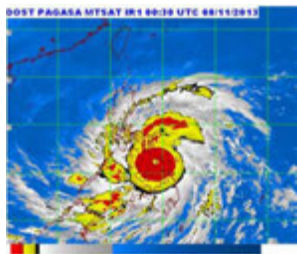
GOAL:
Adaptive and disaster-resilient Asia-Pacific economies towards inclusive and sustainable development





DRR IN NEW NORMAL

DRR IN NEW NORMAL



- 2012: 17 Typhoons
- 2013: 18 Typhoons
- 2014: 11 Typhoons
- 2015: 15 Typhoons
- 2016: 14 Typhoons

DRR IN NEW NORMAL

SUPER TYPHOON YOLANDA (HAIYAN)



TOTAL DAMAGES: USD 2,050,158,363.08

DEAD: 6,386

INJURED: 28,792

MISSING: 1,075

DRR IN NEW NORMAL

SUPER TYPHOON LAWIN (HAIMA)



TOTAL DAMAGES: USD 325,195,233.51

DEAD: 23

INJURED: 120

MISSING: 0

DRR IN NEW NORMAL

BOHOL 7.2 EARTHQUAKE



TOTAL DAMAGES: USD 45,246,281.82

DEAD: 227

INJURED: 976

MISSING: 8



PHILIPPINE INNOVATION IN “NEW NORMAL”

INFRASTRUCTURE



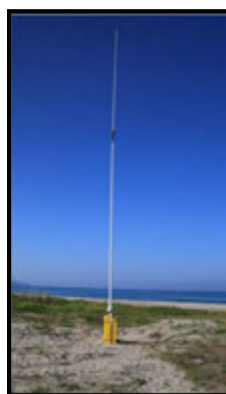
✓ Iloilo Doppler Radar



✓ Zamboanga Doppler Radar

Source: DOST - PAGASA

INFRASTRUCTURE



✓ Operational High Frequency Doppler Radar (HFDR) in NETC and Masinloc, Zambales

Source: DOST - PAGASA

INFRASTRUCTURE



✓ 24/7 fully operational broadband seismic arrays



Cateel, Davao Oriental (CDOF) Station



Bongao, Tawi-tawi (BTTP) Station

✓ Seismic Stations

Source: DOST - PHIVOLCS

INFRASTRUCTURE



○ PHIVOLCS thru JICA
★ PHIVOLCS Community Tsunami Detection

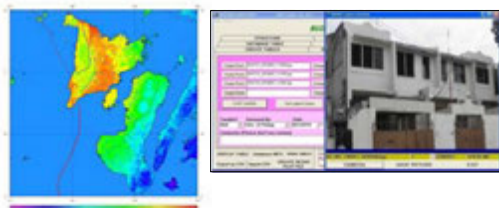
✓ Real-time tide gauges (satellite telemetry)



✓ Community tsunami detection and warning system (SMS)

Source: DOST - PHIVOLCS

ONLINE APPLICATION



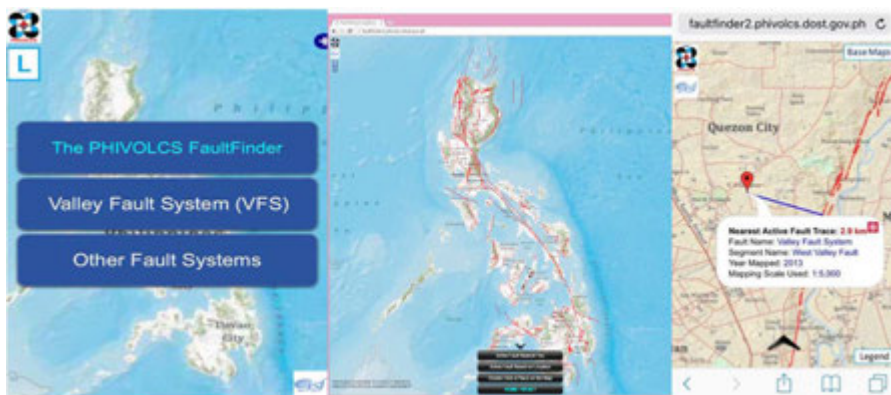
✓ Rapid Earthquake Damage Assessment System (REDAS)



Source: DOST - PHIVOLCS

ONLINE APPLICATION

✓ PHIVOLCS Fault Finder

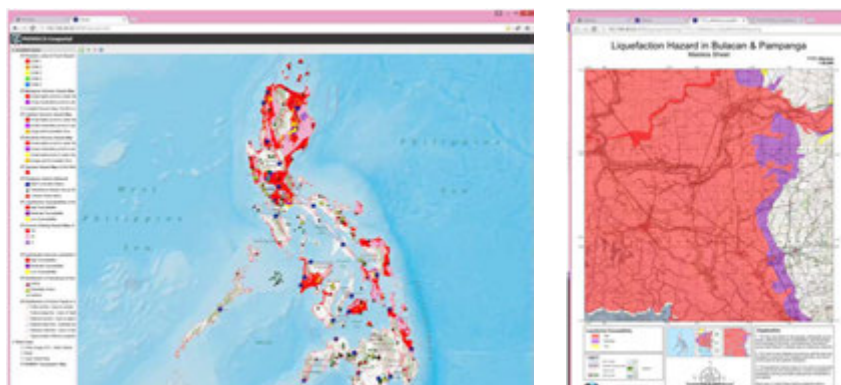


URL: <http://faultfinder.phivolcs.dost.gov.ph>

Source: DOST - PHIVOLCS

ONLINE APPLICATION

✓ PHIVOLCS Geo-Portal



URL: <http://geomatics.phivolcs.dost.gov.ph:8080/geoportal/>

Source: DOST - PHIVOLCS

ONLINE APPLICATION



✓ PHIVOLCS LAVA (Local Active Volcanoes Archive)

URL: www.wovodat.phivolcs.dost.gov.ph

Source: DOST - PHIVOLCS

CONSTRUCTION

Typhoon Resilient Housing Unit



The typhoon-resilient housing units at the NHA Resettlement Site in Cadiz City

CONSTRUCTION



Integrated Water Resources Management Program

- Construct/rehabilitate Flood Mitigation Structures along Major River Basins and Principal Rivers
- Construct water impounding projects to optimize water resources
- Construct Water Supply/Septage & Sewerage/Rain Collectors
- Upgrade/improve drainage capacity
- Complete and update the flood control and drainage master plans and feasibility studies of Major River Basins and Principal Rivers.
- Pursue accreditation of flood control engineers through capacity building and transfer of technology

CONSTRUCTION



Disaster Risk Reduction and Climate Change Adaptation Program

- Rehabilitate, retrofit and strengthen existing bridges
- Provide safe access to highly vulnerable areas
- Improve national roads vulnerable to flooding, landslide and slope failure
- Build evacuation centers incorporating requirements prescribed by NDRRMC
- Upgrade quality standards based on Design Guidelines, Criteria & Standards (DGCS) 2015 which incorporates resilient design to address climate impacts to all infrastructures.

CONCLUSION

- Use of Science and Technology in DRR/CCAM is necessary to make our communities resilient to disasters**
- Online based DRR tools make our decision-making more transparent and efficient**

THANK YOU!