

Disaster Resilience through Risk-informed Planning: Insights from the Philippines' PlanSmart Journey

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Flooding



Earthquakes



Volcanic Eruptions



Philippine Hazardscape



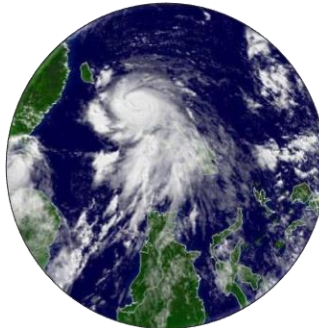
Disease epidemics



Droughts



Storm surges



Typhoons



Landslides



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VISION

Philippines' **central source of information** for accurate and efficient hazards and risk assessment
to help government increase the nation's resilience to natural hazards



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Challenges Being Addressed

1. Data
 - a. Silos
 - b. Interoperability
 - c. Hesitation to share information
2. Technology
 - a. Lack of tools to streamline processes
3. Policy
 - a. Insufficient institutional arrangements
4. People
 - a. Mismatched capacity
 - b. Few technical people
 - c. Resistance to change
5. Leadership
 - a. Few champions



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GeoRiskPH Integrated Platform

Data Governance and Technology

- Data
 - Data infrastructure (16-digit numeric codes)
 - Data access protocols
 - Geographic projections
- Data analyses

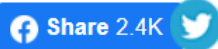


Duterte OKs DOST-developed tech that locates hazards in PH

By Azer Parrocha

 July 2, 2019, 7:52 pm

Share



DOST-DEVELOPED TECH. President Rodrigo Roa Duterte presides over the 39th Cabinet Meeting at the Malacañan Palace on Monday (July 1, 2019). Duterte approved the Department of Science and Technology (DOST)-developed technologies that locate environmental hazards in the Philippines. *(Robinson Niñal Jr./Presidential photo)*

Cabinet Directive was issued for

- (1) All departments and agencies to share to PHIVOLCS the most recent data for hazard and risk assessment.
- (2) All departments and agencies to use GeoRiskPH platform for the conduct of hazard and risk assessments.



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GeoRiskPH PLATFORM



GeoMapperPH
GEORISKPH

For the Development of
the

**NATIONAL
EXPOSURE
DATABASE**

Pre- and Post-
Disaster For
Government Agencies,
Local Government
Units

(WITH
CREDENTIALS)



GeoAnalyticsPH
GEORISKPH

**VISUALIZATION &
ANALYTICS**

Development of Various
Plans

For Government
Agencies, Local
Government Units,
Others

(PUBLICLY
AVAILABLE)



HazardHunterPH
GEORISKPH

For ONE-STOP SHOP
**HAZARD
ASSESSMENT
SERVICE**

For Individuals and
Institutions, NGAs,
LGUs, Everyone!

(PUBLICLY
AVAILABLE)



PlanSmart
Ready to Rebuild

**AUTOMATED
PLANNING
TOOL** for
disaster
rehabilitation
and recovery

(WITH CREDENTIALS)



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GeoRisk Philippines
(GeoRiskPH)

Disaster Rehabilitation and
Recovery Planning Guide
Workbook



GeoMapperPH
MAP ANYWHERE, ANYTIME

GeoAnalyticsPH
RISK ANALYSIS MADE EASY

HazardHunterPH
HAZARD ASSESSMENT AT YOUR FINGERTIPS



READY TO REBUILD PHILIPPINES
REBUILD
WE RISE AS ONE

PHILIPPINES

DISASTER REHABILITATION AND RECOVERY PLANNING GUIDE WORKBOOK



PlanSmart
Ready to Rebuild



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PlanSmart

Ready to Rebuild



Post-Disaster Rehabilitation and Recovery Plan
of Cebu City for Super Typhoon Rai (Odette)



Executive Summary

Typhoon Odette Adapted from agency (FVVS, DOST-PAGASA, DCE)

Typhoon Odette (international name: RAI) is the 13th tropical cyclone that hit the country in 2021. It was first detected as a Low Pressure Area on 12 December 2021 then entered Philippine Area of Responsibility (PAR) on 14 December 2021. It intensified and made 9 landfalls. On 18 December 2021, Typhoon Odette left the PAR.

Source: Agency, Year

Because of **Typhoon Odette**, the following impacts are estimated:

Total population affected in **Local Government Unit of Cebu City** is estimated at **201**. Of the total population affected, **0.02 %** are male while **0.02 %** are female. A total of **0.01 %** are above 60 years old while a total of **0.02 %** are 10 years old and younger. There was no reported casualty.

A total of **4 houses** are damaged, **5** partially and **1** totally. A total of **5 critical facilities** are damaged, **5** partially while **1** totally. Damage to property is estimated at **₱ 497,370,000.00**. Damage to agriculture is estimated at **₱ 22,222,222.00**.

Source: Agency, Year

To ensure that rehabilitation and recovery is conducted in a timely and effective manner, this Rehabilitation and Recovery Plan is prepared. The Rehabilitation and Recovery Program contained in this Plan includes **3** with an estimated investment requirement of **₱ 25,000,000.00** from **2022-2023**.

The PRAs cover **2**, distributed accordingly:

Sector	Number of Projects	Investment Requirement (in PHP)		
		Short-term (within 1 year)	Medium-term (2-4 years)	Total
Housing and Settlement	2	15,000,000.00	0.00	15,000,000.00
Social services	1	10,000,000.00	0.00	10,000,000.00
TOTAL	3	25,000,000.00	0.00	25,000,000.00

The total investment requirement of **total investment requirement** is proposed to be sourced from respective agencies and organizations accordingly:

Table: Investment requirement by Source of Fund

Source of Fund	Number of Projects	Short-term (within 1 year)	Medium-term (2-4 years)	Total
NSRM Fund				
Regular Agency Budget				

Source of Fund	Number of Projects	Short-term (within 1 year)	Medium-term (2-4 years)	Total
LGU				
Non-Government				
TOTAL				

LGU Profile Summary

Name of Local Government Unit (LGU)	Local Government Unit of Cebu City
Focal Person	Juan Dato Cruz
Contact Details	cityadm@cebu.gov.ph
Total Land Area (ha)	29,090.24 (Source: PSA, 2016)
Number of Barangays	80 (Source: PSA, 2016)
Climate Type	Type III (Source: DOST-PAGASA)
Total Population	964,188 (Source: PSA, 2016)
Income Class	1st (Source: PSA, 2016)
Poverty Incidence	4.96 (Source: PSA, 2015 and 2018)
Average Household Size	4 (Source: PSA, 2016)
Primary Economic Activities	

Sample Auto-generated
Rehabilitation and Recovery Plan

Date and Time Generated: Friday, September 3, 2022 9:56:53 AM (UTC) 01220903 1:43



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LGU Profile: Pre-Disaster Maps

PlanSmart Ready to Rebuild

PlanSmart

JUAN DELA CRUZ

DASHBOARD

PLANS

BACKGROUND OF THE PLAN

LGU PROFILE

PROJECTED/ASSESSED IMPACTS OF DISASTER

DISASTER REHABILITATION AND RECOVERY PROGRAM

VIEW R&R PLAN

PHYSICAL

SOCIO-ECONOMIC

HAZARD

PRE-DISASTER MAPS

POST-DISASTER MAP

LANDUSE MAP

Shows the percentage of total land area, population, schools, and health facilities prone to hazards. The map's zoom level will determine the extent of the map that will be displayed in the planning document.

Rain-Induced Landslide

Select Area

CHART TABLE LIST

Total Land Area Prone to Rain-Induced Landslide
Cebu City (Capital)

Very High Susceptibility: 0.1 %

High Susceptibility: 48.0 %

Moderate Susceptibility: 26.9 %

Low Susceptibility: 4.9 %

Not prone: 20.2 %

Total Land Area Prone to Rain-Induced Landslide: 15,639 ha out of 29,090.5 ha (79.8%)

GeoAnalyticsPH

RESET MAP VIEW

Earthstar Geographics | Acknowledge Department of Education (DepEd) as the source. | Acknowledged... Powered by Earthstar Geographics

Maps, charts, and tables are from **GeoAnalyticsPH**

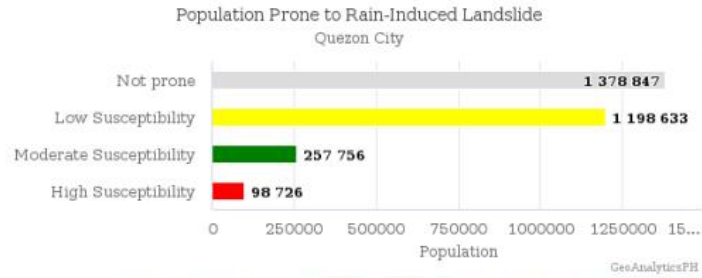


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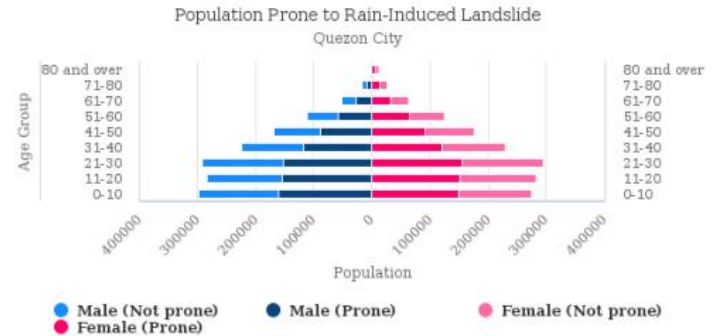


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Population Exposed to Rain-Induced Landslide

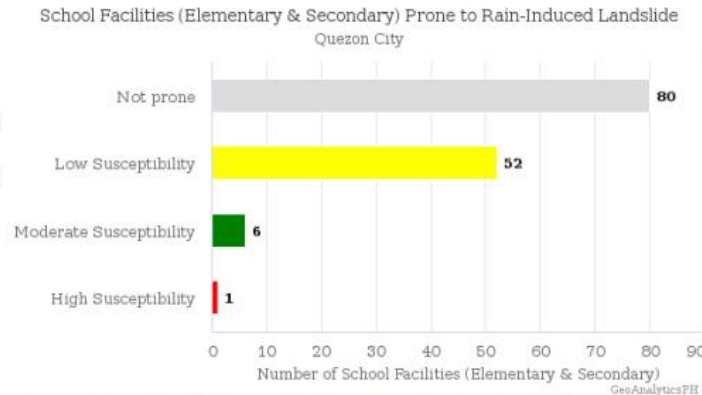


Total Land Area Prone to Rain-Induced Landslide: 5,759.84 ha out of 16,243.92 ha (45.9%)

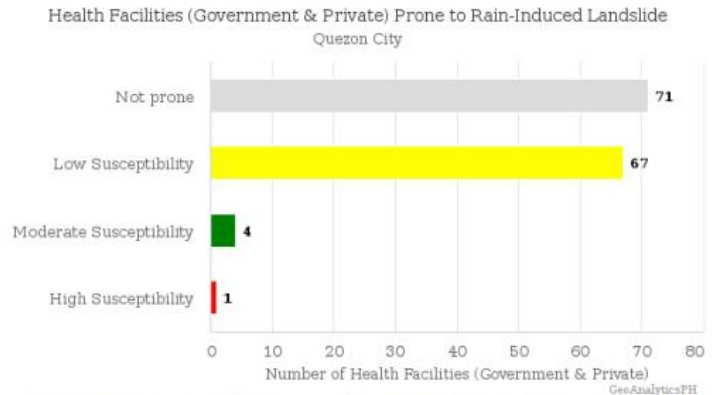


Total Population Prone to Rain-Induced Landslide: 1,555,115 out of 2,933,962 (53%)

Critical Facilities Exposed to Rain-Induced Landslide



Total School Facilities (Elementary & Secondary) Prone to Rain-Induced Landslide: 59 out of 139 (42.4%)



Total Health Facilities (Government & Private) Prone to Rain-Induced Landslide: 72 out of 143 (50.3%)



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DISASTER REHABILITATION AND RECOVERY FRAMEWORK

OBJECTIVES AND STRATEGIES OF THE PROGRAM

PRIORITY PPAS FOR REHABILITATION AND RECOVERY

FINANCING AND INVESTMENT REQUIREMENTS

INSTITUTIONAL ARRANGEMENTS

COMMUNICATIONS STRATEGY

Expected Sector Outcomes and General strategies of Rehabilitation and Recovery Program

Goal

Safer, adaptive, and disaster-resilient Filipino communities that are protected from risks and can cope with and recover quickly from disaster events

Outcome

Medium Term [2-4 years]



- Economic and social conditions in disaster-affected areas were restored with a higher level of resilience and poverty reduced

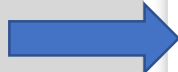
Sector Outcomes

Add new sector outcome by filling out the form below. Fields with an asterisk are required. Click on the Add Sector Outcome once you accomplished the form.

Sector *

- Housing and Settlement
- Livelihood and Business Development
- Physical Infrastructure
- Social services
- Agriculture and Fisheries

- Vulnerable Groups and Individuals
- Culture Sensitivity
- Gender and Social Inclusivity
- Environment Protection and Sustainability
- Poverty Reduction





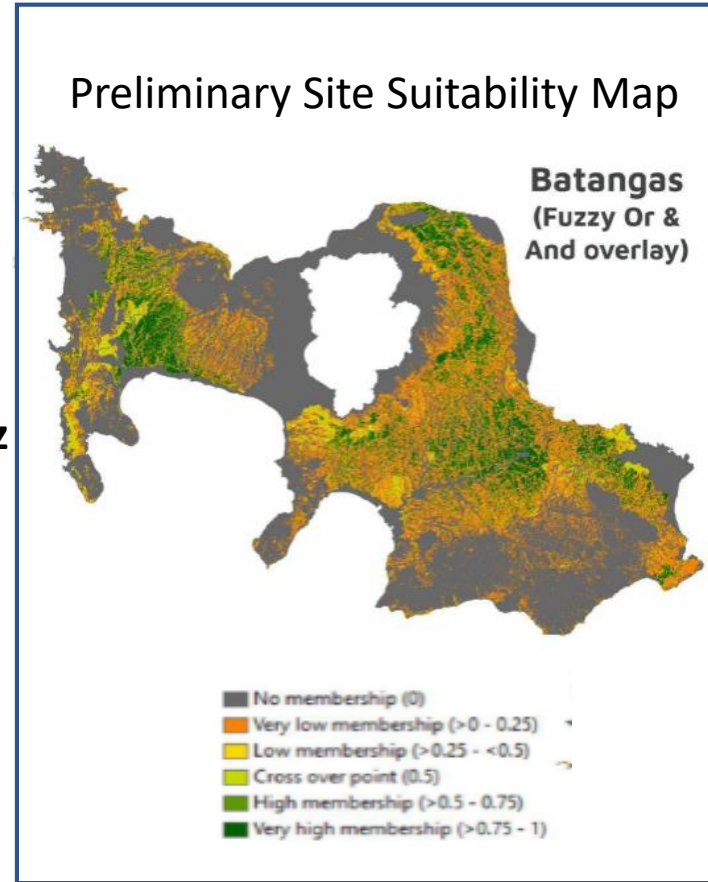
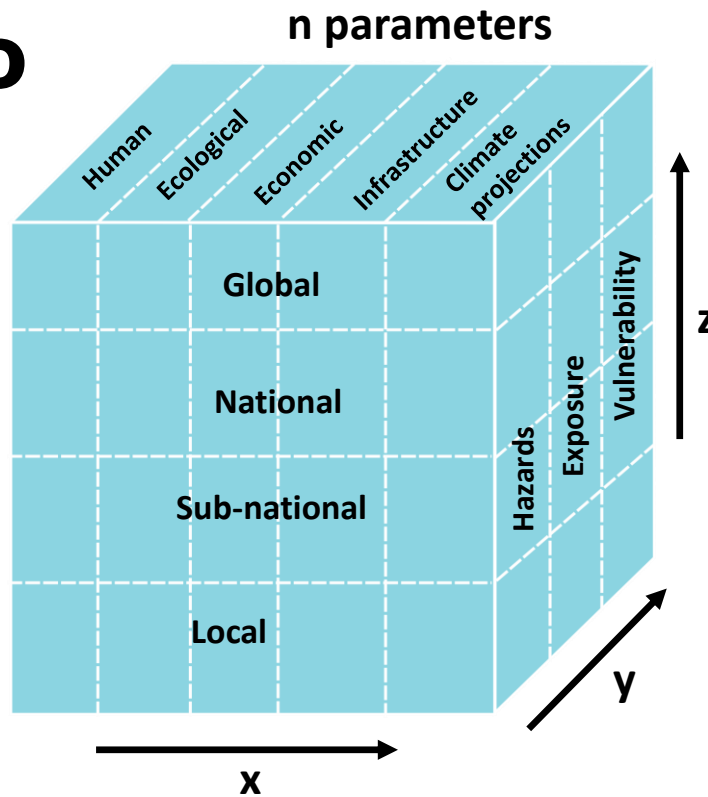
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DATA CUBE

Where to build ?



PlanSmart for Sustainable
Human Settlements (DHSUD)

PlanSmart for Provincial Physical
and Development Framework Plan (DHSUD)

PlanSmart for Safe Schools (DepEd)



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A catalyst
for efficient, timely
and effective planning



GFDRR
Global Facility for Disaster Reduction and Recovery



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP



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