

Transdisciplinary Approach to Resilience Planning Amid the Covid-19 Pandemic

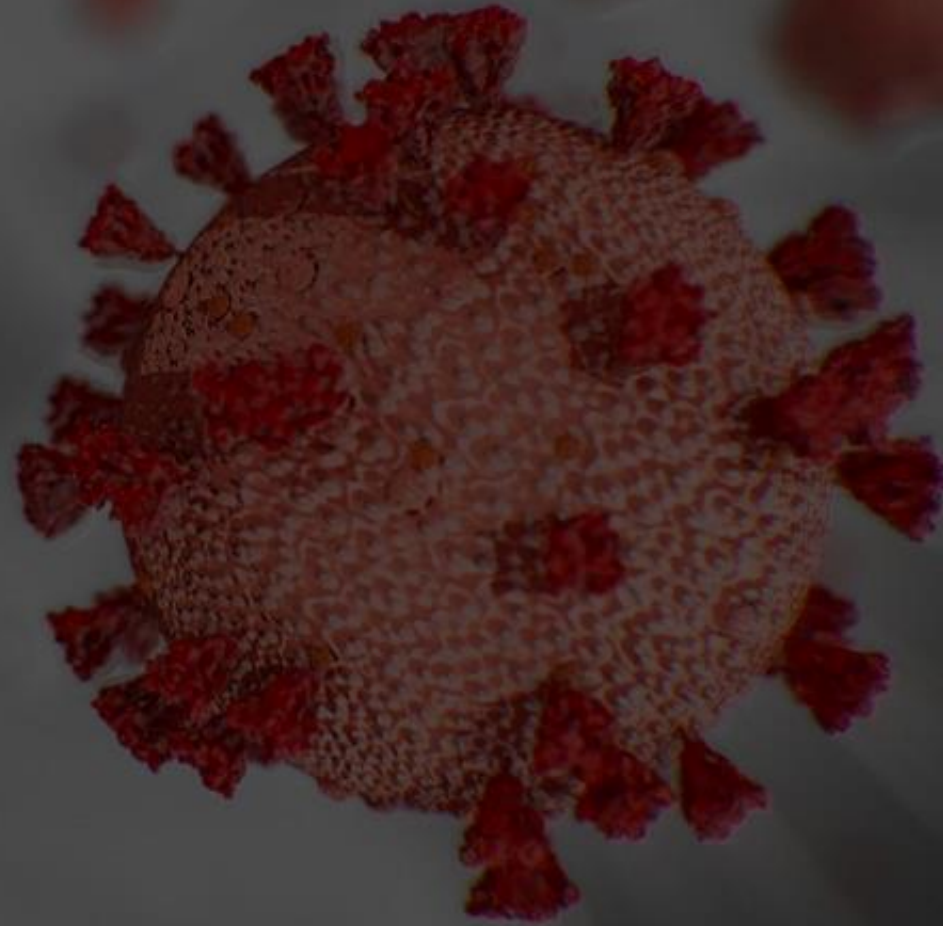
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COVID-19 in the Philippines



[Jan 30] First COVID19 case in PH

[Mar 11] WHO declares COVID19 outbreak as pandemic

[Mar 15] Metro Manila placed under quarantine

[Mar 16] Entire Luzon and associated islands placed under quarantine

[Mar 17] Philippines placed under state of calamity due to COVID 19

[Present] On the 6th month of varying levels of quarantine

Philippines Overview

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324,762

Confirmed

+0 new cases

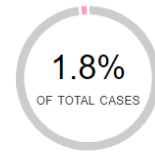
273,123

Recovered

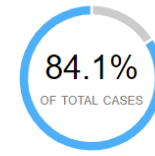
5,840

Deaths

+0 new deaths



Fatality Rate



Recovery Rate

Critical Cases treated in ICU

1758

0.5% of total cases

Daily Cases Receiving Treatment

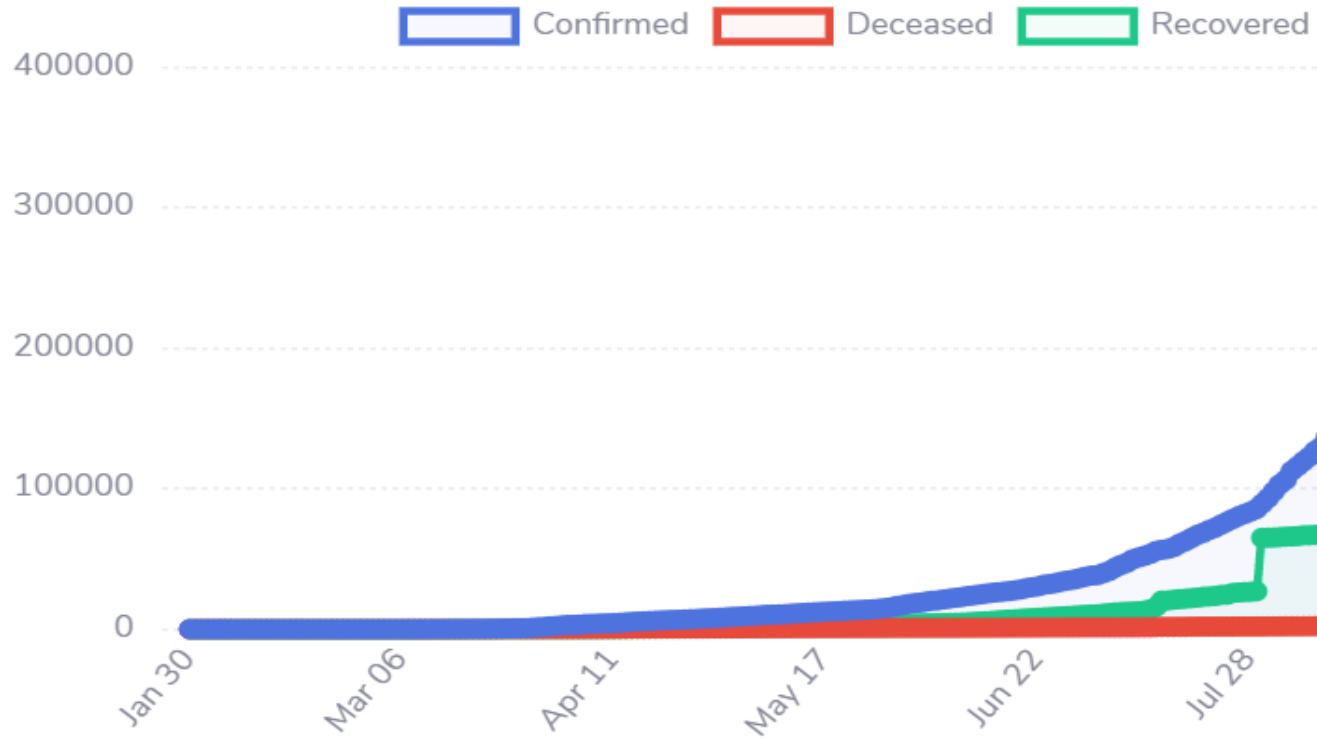
45799

14.1% of total cases

Daily Confirmed Cases

2953

Per Million Population





Amid the COVID-19 pandemic, the threat of other hazards remains

BULACAN

METRO MANILA

LAGUNA

WEST VALLEY FAULT

A M7.2 Earthquake Scenario





Climate & Disaster Risk Assessment for the City of Manila

- *Hazard profiling & structural vulnerability assessment for critical facilities*

The challenge of limited mobility in the new normal

- Government-imposed restrictions
- But also, and more importantly, on account of **personal health and safety**

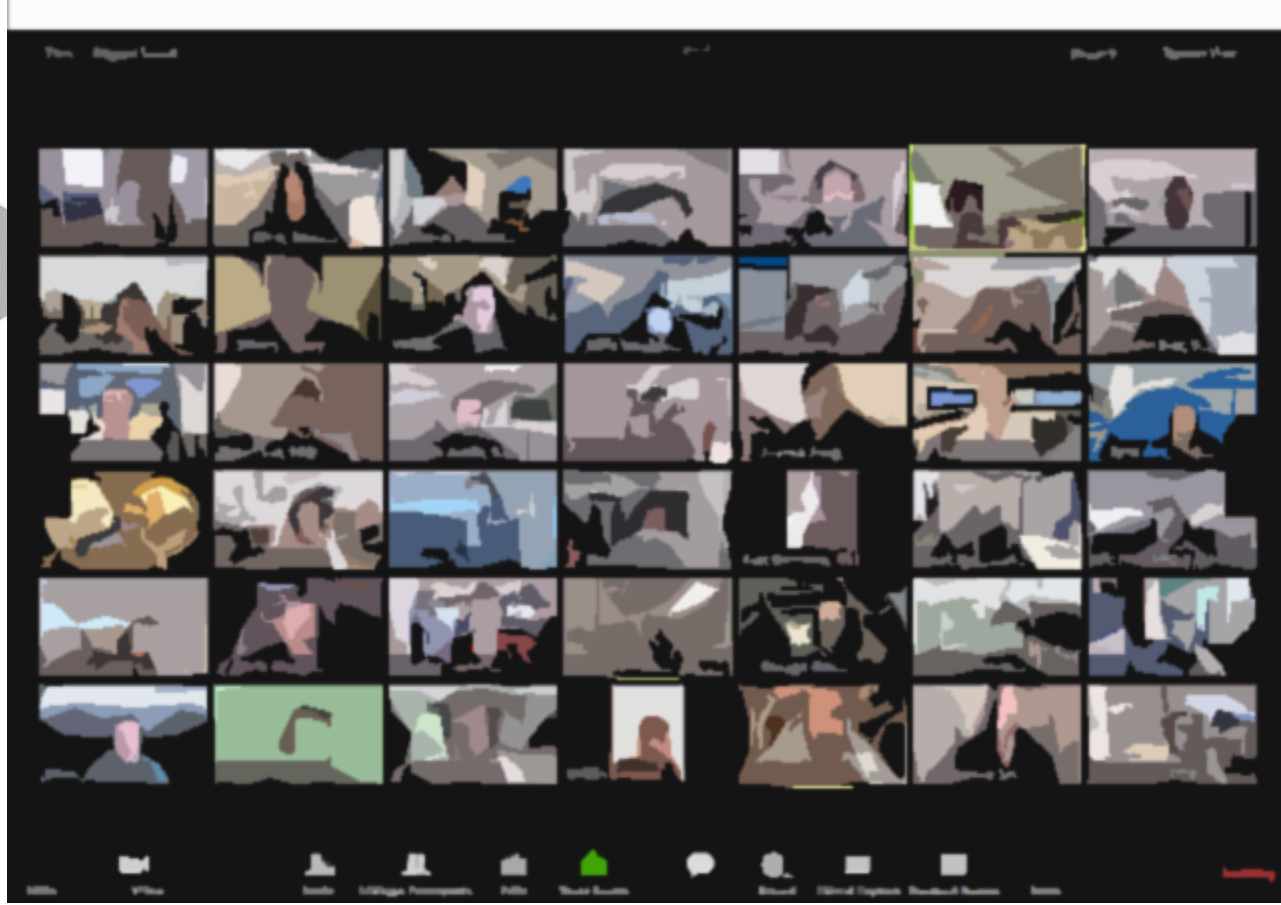


The New Normal

Stakeholder consultations



Then



Now

Key Challenges



Connectivity issues
and the adequacy of
representation

Blended design: a mix of online and offline (pre-workshop) activities to reduce data requirements, and to allow stakeholders to contribute with minimal data requirements



Nuances that are
easily picked up in
face-to-face meetings
aren't easily picked
up in online meetings

Strong collaboration with social scientists to factor in how to elicit these nuances and other important nonverbal feedback

Sidewalk (street) surveys **then**



Sidewalk (street) surveys **now**



- The view may be obstructed (as by gates) and we cannot “enter” to verify



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Imagery Date: 11/2019 14°35'28.68" N 120°57'26.47" E elev 5 m eye alt 14 m 6 m



Al-Shatie Mosque
Temporarily closed

Padz Piso Net

Eugene Floreno
Photoprint
Delivery

Benigno Aquino
Elementary School

Convento Sto.
Nino de Baseco

JAY SKIN CARE

GoSip Milktea Shop

• **SATELLITE IMAGERY** helps us extract additional information
(e.g. to determine if there is plan irregularity, street access)

Sen. Benigno Aquino
Jr. Elementary School

Salt & Light Church

Rhodora Cosmetics
Cosmetics store

BASECO Health Center

Gaspar Eatery

Silog Boulevard
Shawarma Avenue
Takeout

Sto. Niño De
Baseco Parish

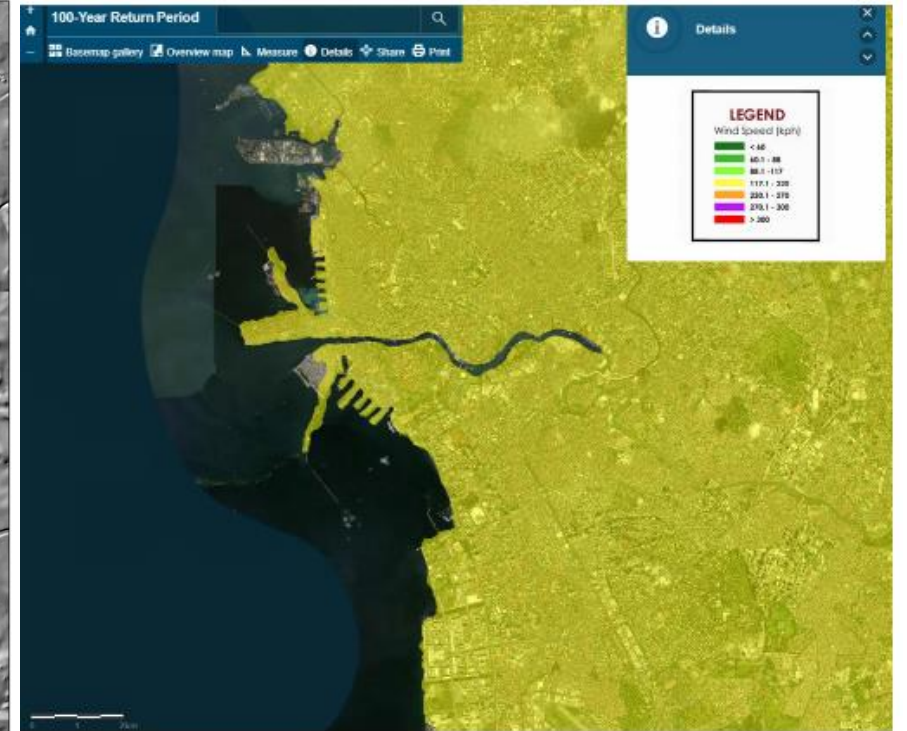
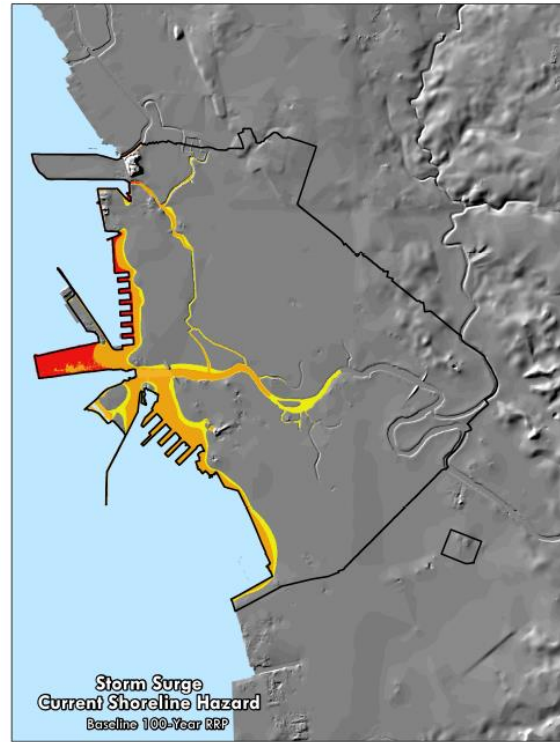
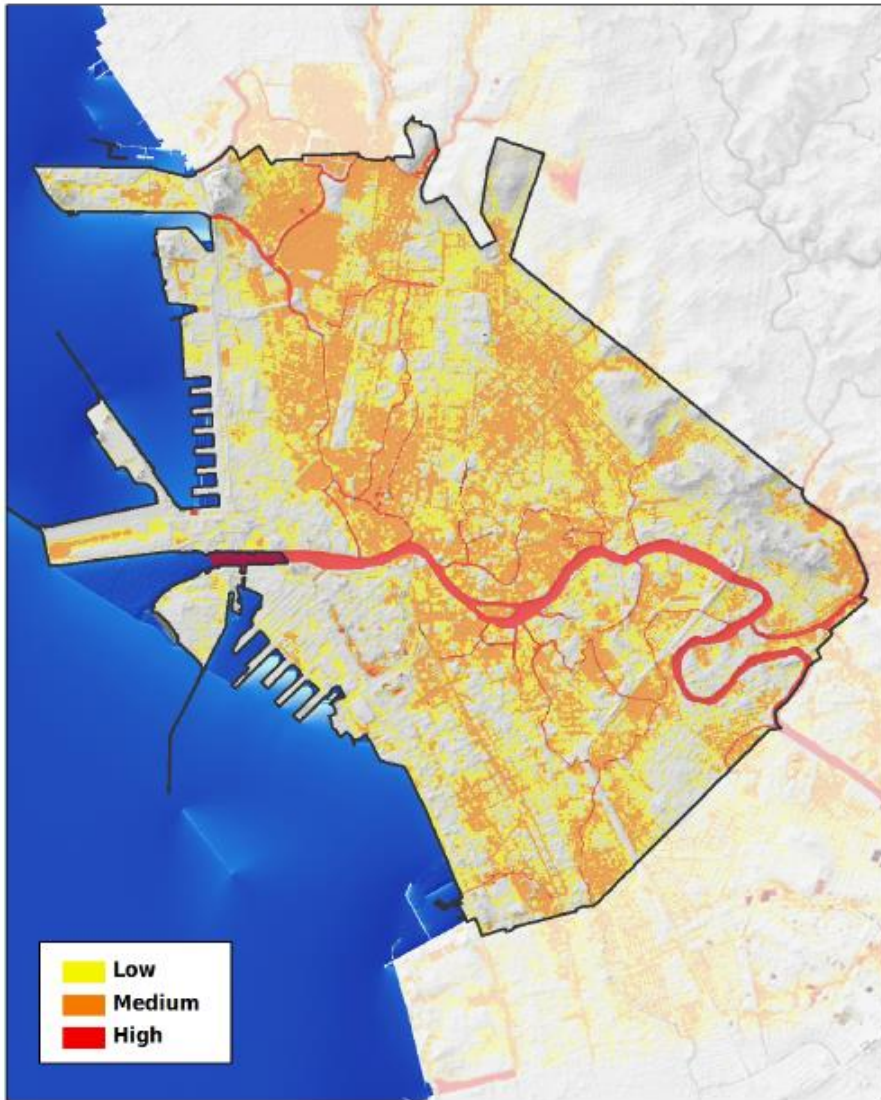
President Corazon C.
Aquino High School

CHOY AND
GINA'S STORE
Temporarily closed

U-Go Travel and tour
Home goods store

Google

25-Year Rain Return Flood Hazard Map



Geolocati on

enables easy overlay with hazard maps to determine hazards in the vicinity

BASECO HEALTH CENTER



HAZARD DETAILS

- 12.1 km from West Valley Fault
- Potential High Intensity VIII ground shaking
- Possibility of a 4 to 4.99-meter tsunami
- HIGH liquefaction potential

- Up to 0.5m flood (25-year return period)
- Severe winds between 117 to 220kph
- Storm surge prone: 1 to 4 meters

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Grassroots partnership to enhance the reliability of data



BASECO HEALTH CENTER

STRUCTURE DETAILS (FEMA 154 assessment)

Basic score (C1)	1.5
No vertical irregularity	0.0
Plan irregularity	-0.6
Post-benchmark	1.9*
Soil type (E)	0.0
FEMA Score (L1)	2.8

**confirmed through barangay officials*

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Imagery Date: 11/2019

14°35'28.68" N 120°57'26.47" E elev 5 m

19
eye alt

6 m

1:57 PM

AN ONGOING PROJECT

675 Gen. Geronimo



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Imagery Date: 1/2019 14°36'27.64" N 120°59'49.03" E



Google Earth

Imagery Date: 7/2019 14°36'23.45" N 120°58'21.70" E elev. 4 m eye alt. 3 m



20

Goog

Imagery Date: 3/2018 14°34'18.15" N 121°00'17.35" E elev.

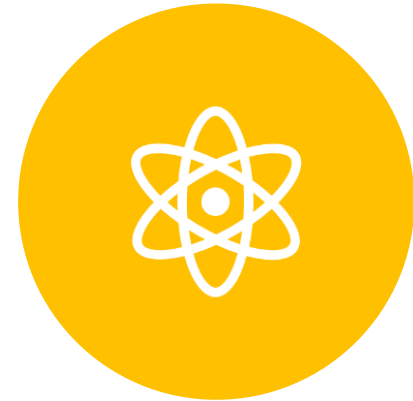
Future work



WEB CRAWL TO AUTOMATE
DATA COLLECTION



AI INTEGRATION FOR THE
ANALYSIS



CITIZEN SCIENCE FOR WIDER
GRASSROOTS INTERFACE

Resilience and Building Back Better

Disaster Risk Reduction

Community Recovery

Effective Implementation

Structural Resilience

Multi-hazard Land Use Planning

DRR Education and Early Warning

Psychosocial Recovery

Economic Recovery

Institutional Mechanism

Legislation and Regulation

Monitoring and Evaluation

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