

EARLY WARNING MECHANISMS IN PARANAQUE CITY

EARLY WARNING SYSTEMS

the set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by hazards to take necessary preparedness measures and act appropriately in sufficient time to reduce the possibility of harms or losses.

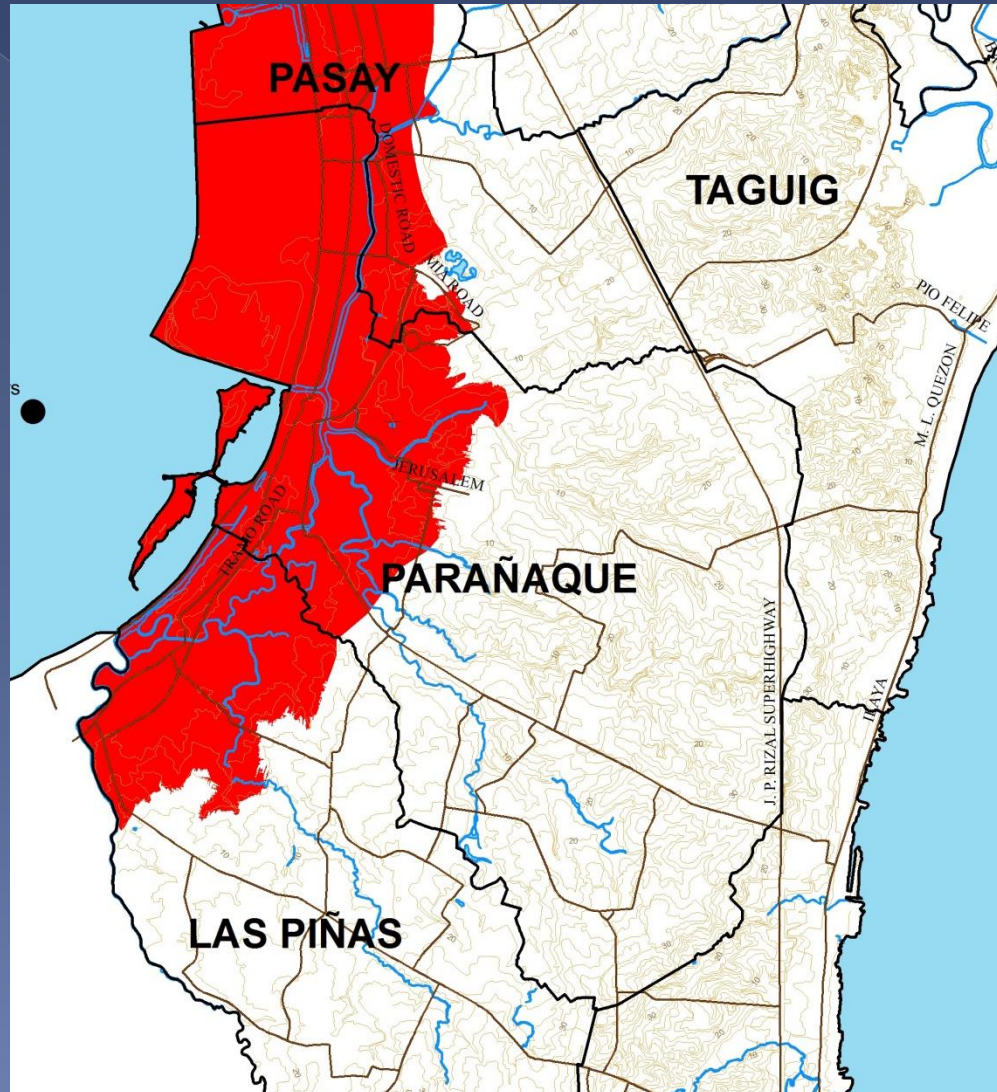
IMPORTANCE OF EARLY WARNING SYSTEMS

- Importance of Flood Early Warning Systems
- • Get advance notice of flood occurrence.
- • Early Warning Systems can help to reduce casualties and damages.
- • Vulnerable people in flood-prone areas are warned in time so that they can
- leave the danger zone and go to a safer place to avoid casualties.
- • Can transfer moveable items to safer grounds.
- • EWS contribute in protecting and supporting sustainable social and economic
- development.
- • The society benefits from an early warning system.

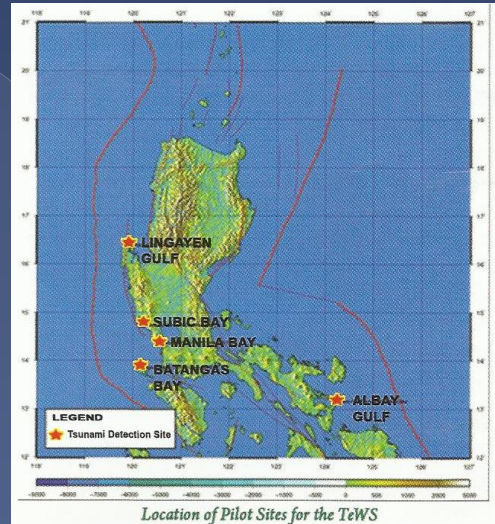
Tsunami Early Warning System (TeWS)

- Project of the DOST (Phivolcs and ASTI)
- To set-up local tsunami warning systems for selected high-risk coastal communities
- Maximize the use of real-time detection and timeliness of information gathering and dissemination
- 5 pilot detection sites – Lingayen Gulf, Albay Guld, Subic Bay, Manila Bay and Batangas Bay
- For Manila bay P'que was chosen because of the volume of communities near the coastal area
- 4 warning systems will be installed in the brgys of La Huerta, Don Galo, Tambo and San Dionisio

TSUNAMI HAZARD MAP



Establishment of a Cost-Effective Local Tsunami Early Warning System (TeWS) for Selected High-Risk Coastal Communities of the Philippines (2011-2013)



Location of Pilot Sites for the TeWS



Installation of Detection and Warning system

Wet sensor 10m

Ultrasonic Tide Gauge

Wet sensor 5m

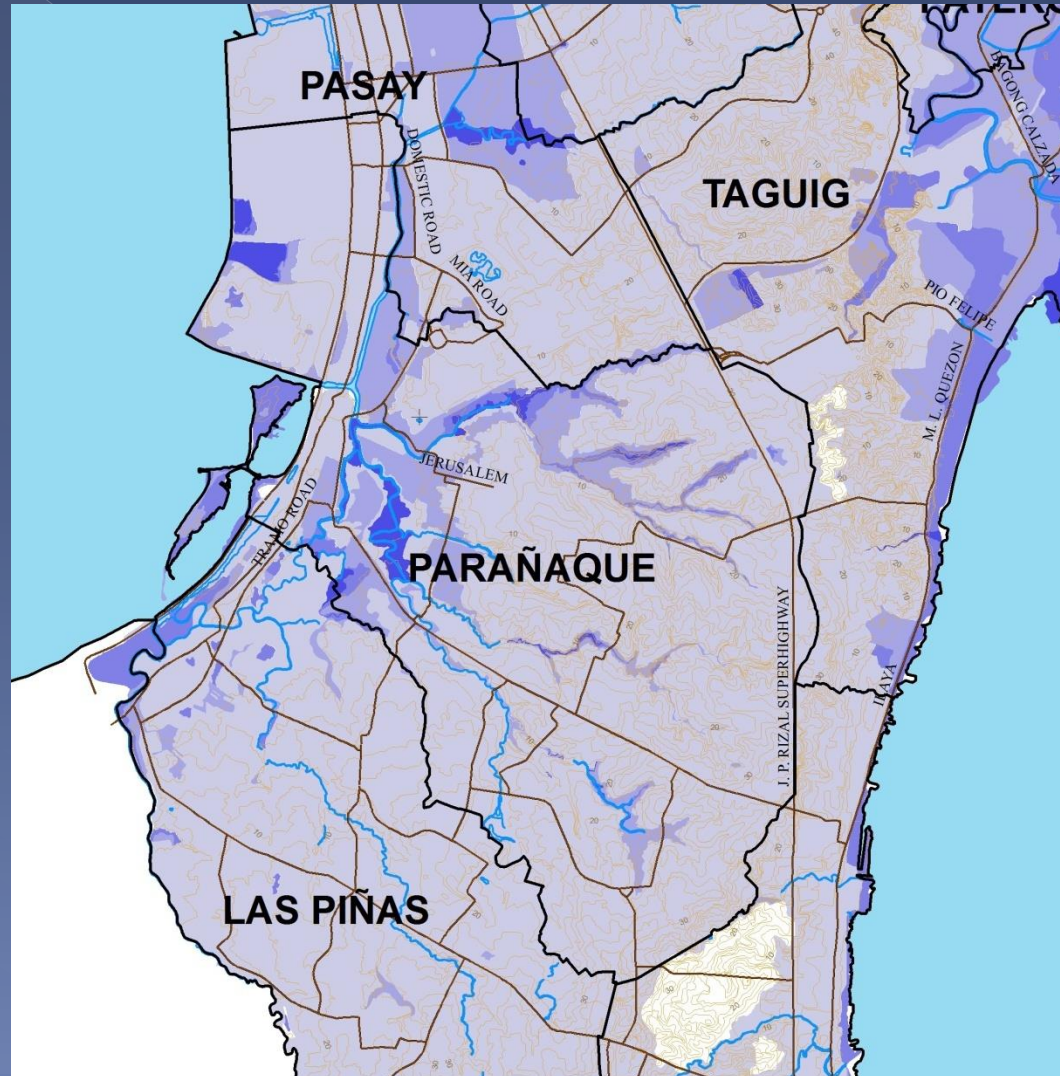
Wet sensor 1m

Dry sensor

First complete Tsunami Detection Pole offshore Bolinao, Lingayen Gulf, installed in September 2012

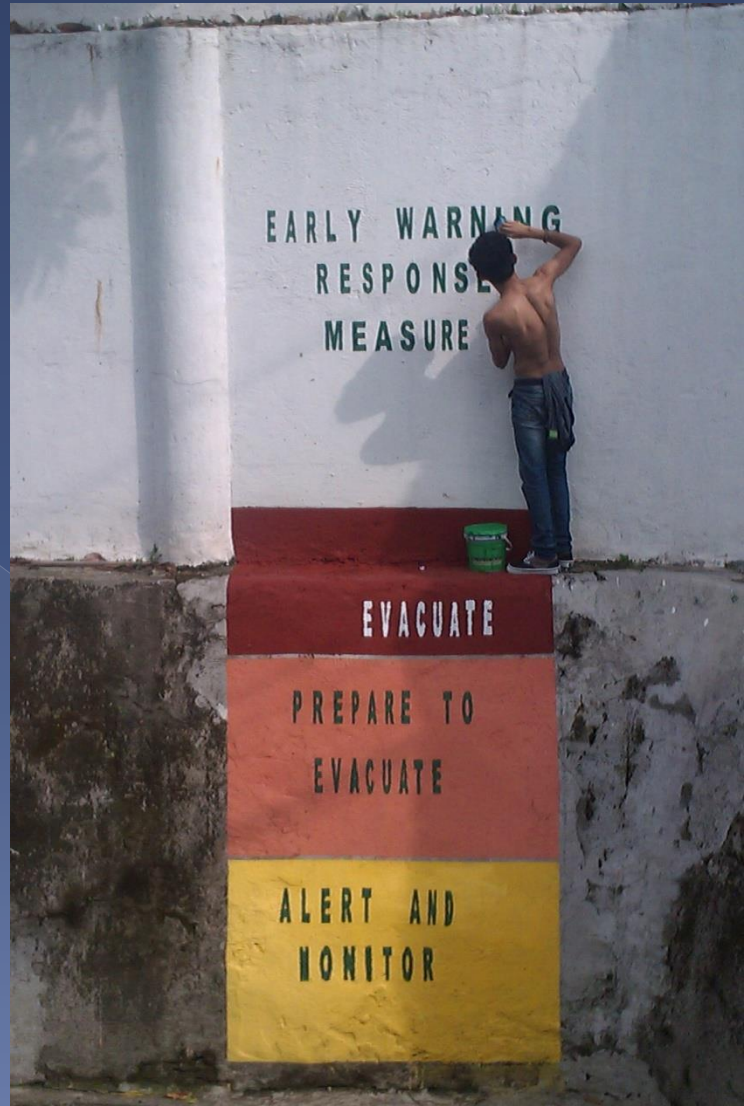
A diagram illustrating the installation of a tsunami detection pole. The pole is a tall, slender structure with a metal scaffolding around it. A person is shown climbing the scaffolding. The pole is equipped with several sensors: a Wet sensor 10m at the top, an Ultrasonic Tide Gauge, a Wet sensor 5m, a Wet sensor 1m, and a Dry sensor at the base. The pole is installed offshore, with a building and a fence visible in the background.

FLOOD HAZARD MAP



FLOOD MONITORING AND WARNING - WATER LEVEL GAUGE

- ◎ **YELLOW** – “Alert and Monitor” – monitor water level and local weather data.
- ◎ **ORANGE** – “Prepare” – Make necessary preparations for evacuation.
- ◎ **RED** – “Evacuate” – conduct evacuation measures. Critical or spilling level



FLOOD LEVEL GAUGE

- Measures flood water levels in flood prone areas
- Can be used to make accurate reporting of flood levels – “water level and flood level gauge no.”
- Placed along Dr. A. Santos Ave. DASA and Quirino Ave.
- Reporting System: FLG gauge number and level



TYPHOON EARLY WARNING

Signal #1

winds of 30–60 km/h (20–35 mph) are expected to occur within 36 hours

Signal #2

winds of 60–100 km/h (40–65 mph) are expected to occur within 24 hours

Signal #3

winds of 100–185 km/h, (65–115 mph) are expected to occur within 18 hours.

Signal #4

winds of at least 185 km/h, (115 mph) are expected to occur within 12 hours.



CLASSIFICATIONS of TROPICAL CYCLONE

- ⦿ **Tropical depression** - presence of clouds and thunderstorms; maximum sustained winds **< 38 mph**
- ⦿ **Tropical Storm** - strong thunderstorms; maximum sustained winds **39-73 mph**
- ⦿ **Typhoon** - maximum sustained winds **74 mph or higher**

