Philippines Country Report - Experience in Coping with Covid-19

Philippine Institute of Volcanology and Seismology – Department of Science and Technology

27 August 2020, DOST-PHIVOLCS

Online session of the ICTP/PTWS Regional Working Group on Tsunami Warning and Mitigation System in the South China Sea Region (ICG/PTWS WG-SWS), 27 & 28 August 2020
Earthquake Events 01 March – 16 August 2020

Total number of plotted events: 6681
Magnitude range: 1.0 – 6.6

Number of earthquakes with no felt intensities: 6360
Number of felt earthquakes: 321
18 August 2020 Mw 6.6 Masbate Earthquake

**Date:**
18 Aug 2020

**Time:**
08:03 AM PST

**Coordinates:**
11.98°N, 124.01°E

**Depth:**
013 km

**Magnitude:**
Mw 6.6

**Location:**
022 km S 20° E of Cataingan (Masbate)

**Recorded:** 464

**Plotted:** 239

**Felt:** 33

**Mag. Range:** 1.6 - 5.1

**Ref. Station:** CNPS

As of August 27, 2020
11:00 AM PST
Issuance of Tsunami Information

Local Events

Distant Events
<table>
<thead>
<tr>
<th>Issues and Concerns</th>
<th>Solutions</th>
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</table>
| Management of earthquake and tsunami monitoring systems during the declaration   | • Adapted new office protocols that follow health protocols set by the Inter-Agency Task Force (IATF) for Covid-19 Pandemic and local agencies.  
| of a national health emergency                                                    | • Implementation of modified work arrangements  
|                                                                                 |   • Updates through online meetings  
|                                                                                 |   • In-house skeletal workforce during enhance community quarantine period  
|                                                                                 |   • Work-from-home arrangements with connectivity  
|                                                                                 | • Emergency funds supported all monitoring activities  
|                                                                                 |   • Transportation of skeletal workforce  
|                                                                                 |   • Provision of hazard allowance  
|                                                                                 | • Repair and preventive maintenance of monitoring and communication equipment  
|                                                                                 |   • Maintenance performed by nearest technical staff or by the local government partners  
| Maintenance of earthquake and tsunami monitoring systems                         |                                                                                                                                                                                                            |
| Staff performance and project deliverables                                       | • Learning and development activities for work-from-home staff related to institutional goals  
|                                                                                 |   • Capacity building on technical and leadership skills  
|                                                                                 |   • Conduct online training on Tidal Analysis Software Kit (TASK) software  

Support needed from SCSTAC

• Continued timely provision of tsunami advisories and products
• Online courses on various topics related to earthquakes and tsunami
  • Seismic Data Processing
  • Earthquake and Sea-level Monitoring
  • Tsunami propagation and inundation modelling
  • Other technical skills like computer programming
• Quarterly meetings with regional members
• Perform regional tsunami exercises
Education and Outreach

Alam mo ba?

Tsunami sa Pilipinas

**Mga Tsunami na Malayo Ang Pinagmulan**

(Far-field Tsunamis)

- Manggagaling sa mga bansang nakapalibot sa *Pacific Ocean* gaya ng bansang Chile, Alaska sa USA at Japan
- Ang tsunami ay makararating sa baybayin ng Pilipinas mula 1 hanggang 24 oras

**May Sapat na Panahon para Makapagbigay ng Babala**

ang Pacific Tsunami Warning Center (PTWC), Northwest Pacific Tsunami Advisory Center (NWPTAC) at DOST-PHIVOLCS

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Lokal na Tsunami (Locally-generated Tsunamis)

- Magmumula sa mga karagatan sa paligid ng Pilipinas. Ang unang tsunami ay **makararating sa pinakamalapit na baybayin mula sa episentro ng lindol** sa loob ng 2 hanggang 5 minuto matapos ang lindol.

- Walang sapat na panahon para sa babala. Agad na **LUMIKAS** patungo sa mataas na lugar o papalayo sa dagat!
**Education and Outreach**

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**FACTS ON THE 17 AUGUST 1976 MORO GULF EARTHQUAKE AND TSUNAMI**

- **M 8.1** Magnitude
- **12:11 am** Time
- **Intensity VII**
  - Earthquake City: Cotabato City
  - Jolo-Sulu, Zamboanga City

**Earthquake impacts**

**Tsunami**

- Earliest wave arrived around 2 or 5 minutes after the intense shaking.
- As high as 9 meters were reached in the town of Lethok, Sultan Kudarat.

- Affecting coastal areas: Pagadian City, Cotabato City, Zamboanga City; provinces of Zamboanga del Sur, Lanao del Norte, Lanao del Sur, Maguindanao, Sultan Kudarat, Basilan, and Sulu.

- Numerous buildings and infrastructures were damaged in Cotabato City.
- 14 buildings were partially damaged in Zamboanga City.
- Quirino Bridge and Tambora Bridge in Cotabato City sustained damages.

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**People affected**

- 8,000 estimated deaths
- About 10,000 injured
- More than 90,000 homeless

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**Makitahok sa WORLD TSUNAMI AWARENESS DAY tungo sa 5 NG NOYEBEMBRE**

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**Tsunami sa Agosto**

Ayon sa talain ng kumpirmadong tsunami na naganap sa Pilipinas mula 1589-2012, pito rito ay nangyari sa buwan ng Agosto. Balikan natin ang tatlo sa mga ito.

- **02 Agosto 1968** 4:13 ng umaga
  - M 7.3 Magnitude
  - 3 metro Tide ng aben

- **15 Agosto 1918** 11:18 ng gabi
  - M 8.0 Magnitude
  - 8 metro Tide ng aben

- **17 Agosto 1976** 12:11 ng umaga
  - M 8.1 Magnitude
  - 9 metro Tide ng aben
Education and Outreach

The 1976 Moro Gulf Earthquake and Tsunami is the most disastrous tsunami in the Philippines in the last four decades.

On 17 August 1976 at 12:21 AM, a magnitude 8.1 earthquake hit the island of Mindanao.

Tsunami waves as high as 9-meter struck the town of Lebak in Sultan Kudarat.

Be INFORMED, be PREPARED!

A tsunami is a series of waves commonly generated by an earthquake under the sea.

Tsunami speed and height depends on the depth of water.

Near shoreline:
- Speed = 30-50 km/h as fast as a bicycle.

Farther from the shore:
- Speed = 100-800 km/h as fast as a car in expressway.

Tsunami waves can reach destructive heights onshore.

Preparedness:
- After a strong earthquake, MOVE TO HIGHER GROUNDS or farther inland.
- Never go down the beach to watch. When you see the wave, you are TOO CLOSE to ESCAPE from it.
- Stay out of danger areas until “all clear” is issued by the local authority.

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Education and Outreach

https://www.youtube.com/watch?v=xCYuVb2_Ls8&t=3s

November 5 is the World Tsunami Awareness Day as designated by the United Nations

#WTAD2018 #TsunamiDay Impacts of earthquake and tsunami
**Education and Outreach**

**6 STEPS During a Strong Earthquake in times of COVID-19**

Immediate life safety is the priority when evacuation after an earthquake is necessary. It is important for the public to understand that an earthquake evacuation takes priority over a COVID-19 Stay-at-Home order. It is also important that risks of COVID-19 spread among the public during evacuations are managed.

Stay safe during and after a strong earthquake. Follow these steps:

1. **Duck, cover and hold during a strong ground shaking.**
   - **DUCK**
   - **COVER**
   - **HOLD**

2. After the shaking, vacate the building using the safest and fastest way out while observing at least one meter distance.
   - Do not forget to wear your face mask and bring your emergency bag.

3. **Walk briskly. Do not run.**

4. **Stay calm. Do not push.**

5. **Proceed to the nearest open space. Observe physical distancing.**

6. **Wait for advisory from building management. If it is safe to go back.**

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**6 NA MGA HAKBANG Habang may isang Malakas na Lindol sa panahon ng COVID-19**


Maging ligtas habang atrakta pa ng mga malakas na lindol.

- **Duck, cover and hold** habang may malakas na lindol.

- **Mag „Duck, cover and hold” habang may malakas na lindol.**

1. **Mag „Duck, cover and hold” habang may malakas na lindol.**
   - **DUCK**
   - **COVER**
   - **HOLD**

2. **Pagkatapos ng lindol, lalaban ng gusali gamit ang paikot-ikot at pisika (physical distancing) sa daan habang sinusunod ang isang metro o higit pa.**
   - Huwag kalimutan karaan ang gusali gamit ang pisika (physical distancing).

3. **Maglakad ang malili.**
   - **Huwag tumakbo.**

4. **Maglakad ang malili.**
   - **Huwag magsulat.**

5. **Pamantad na panikadakip sa bakunang lugar. Sundin ang physical distancing.**

6. **Maghiya sa pugad ng parusan na ng gusali kung ligaya ang hamak sa lindo.**
Earthquake & Tsunami (24/7):
Tel. Numbers
+632 929-9254
+632 426-1468 loc 124 / 125
Fax number
  +632 927-1087

Volcano (24/7):
Tel. Numbers
  +632 426-1468 loc 127
Telefax number
  +632 927-1095

IEC materials:
  +632 426-1468 loc 128
  +632 927-4524

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@phivolcs.dost