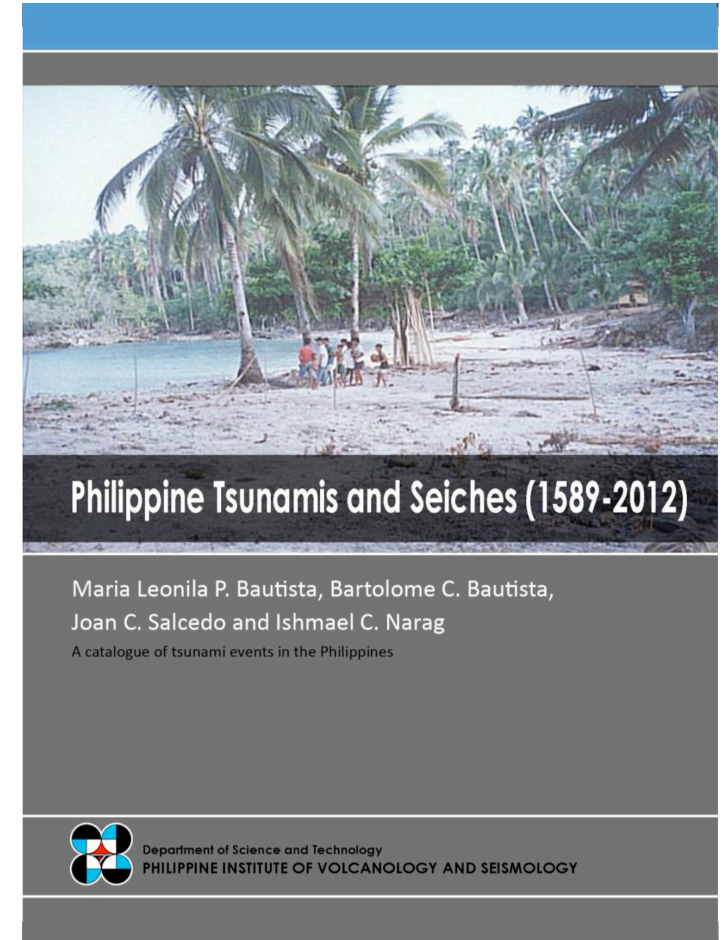
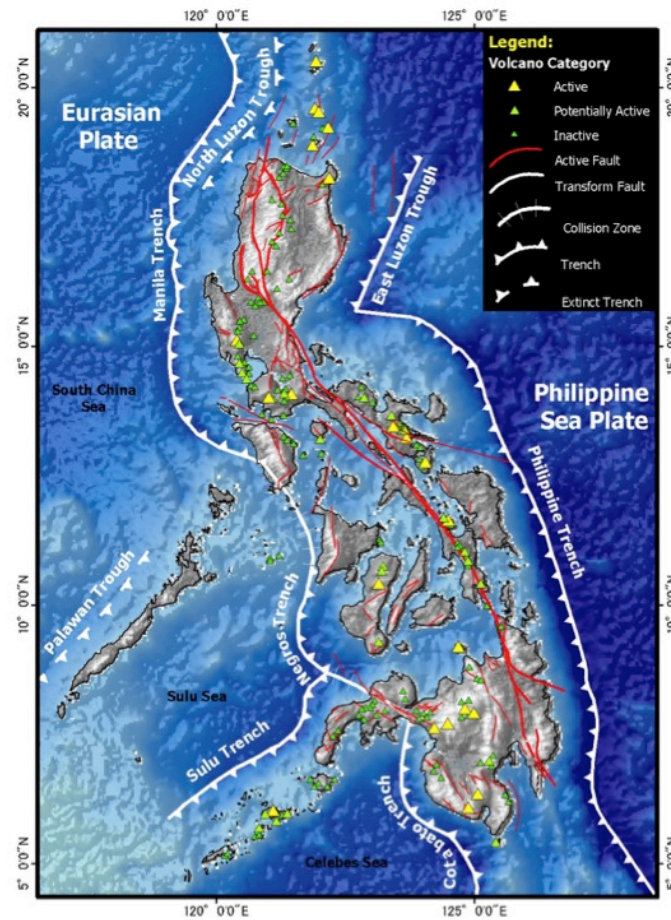
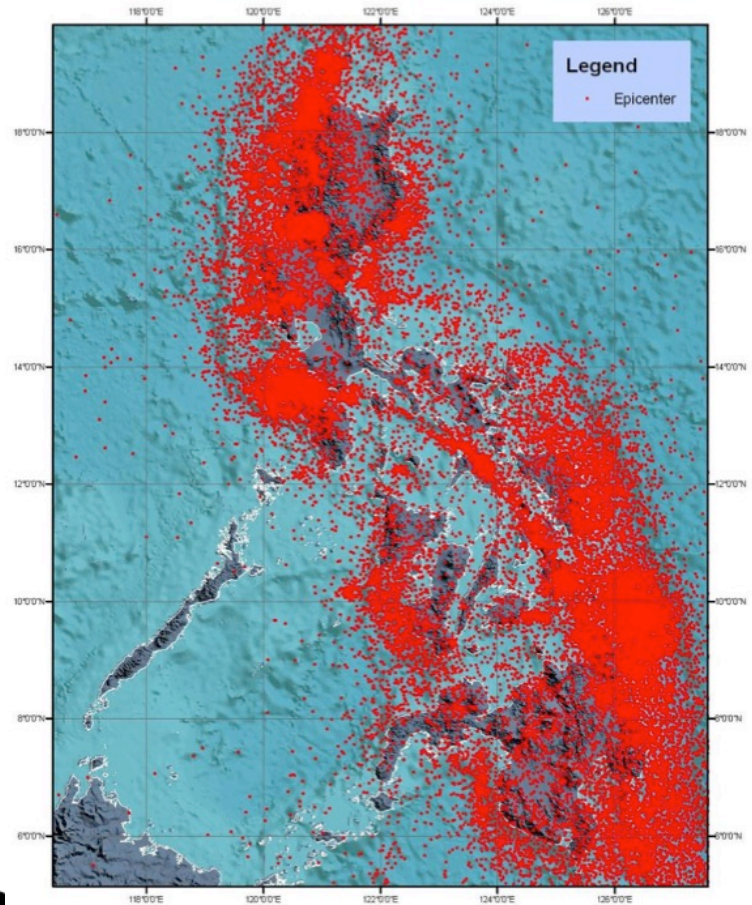


Country Report - Philippines

Philippine Institute of Volcanology and Seismology
Department of Science and Technology



Seismotectonic Setting



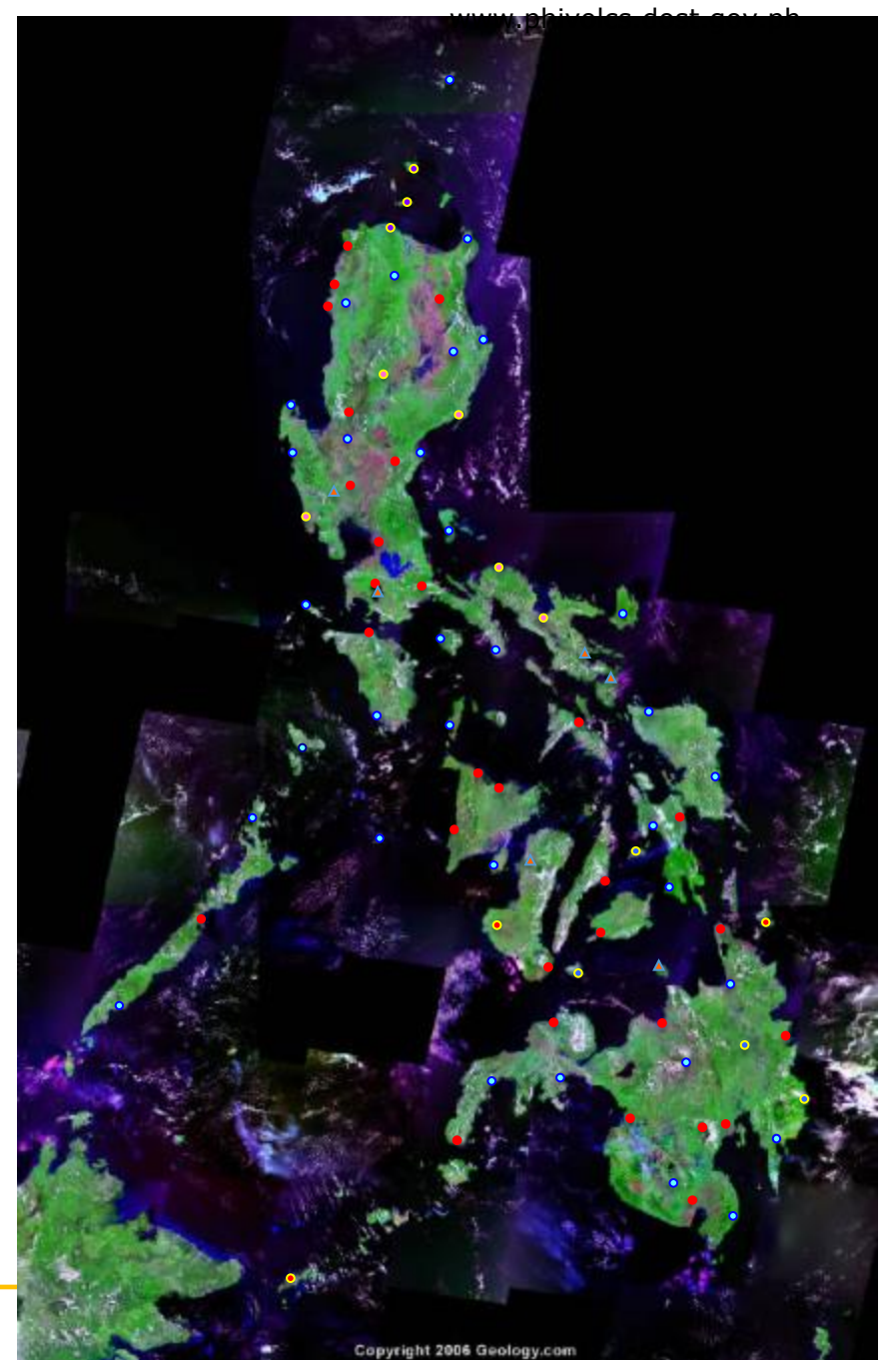
Philippine Seismic Network

- **One hundred(111) station network**

- Seismic stations
- Volcano observatories

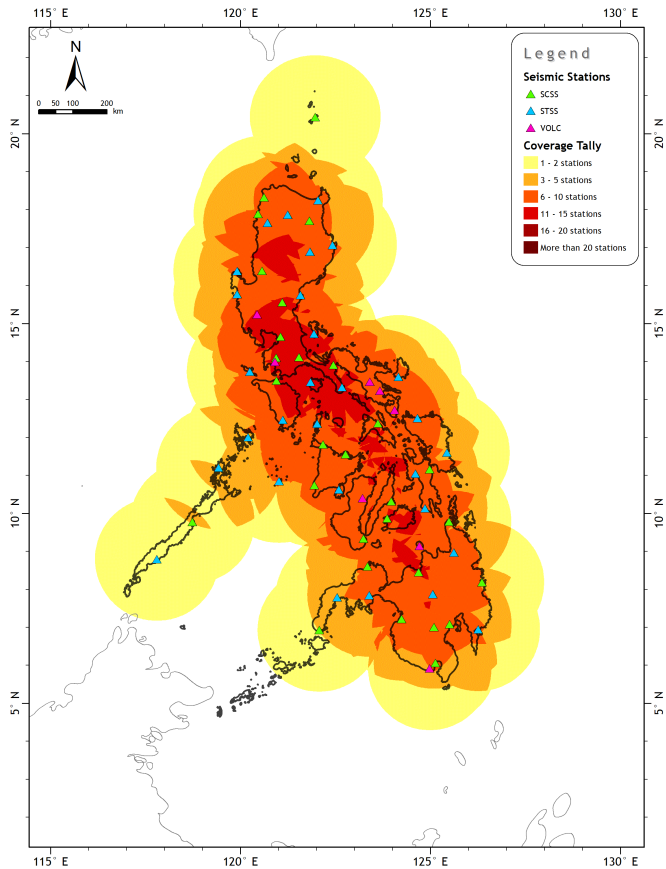
- **Ongoing Network Development Activities**

- Target (2021): 112 stations
- Target (2022): 115 stations
- Acquisition of earthquake monitoring & communication equipment
- Commissioned Mindanao Cluster Center (Davao) and construction of the Visayas Cluster Center (Cebu)
- Continued capacity enhancement of technical staff

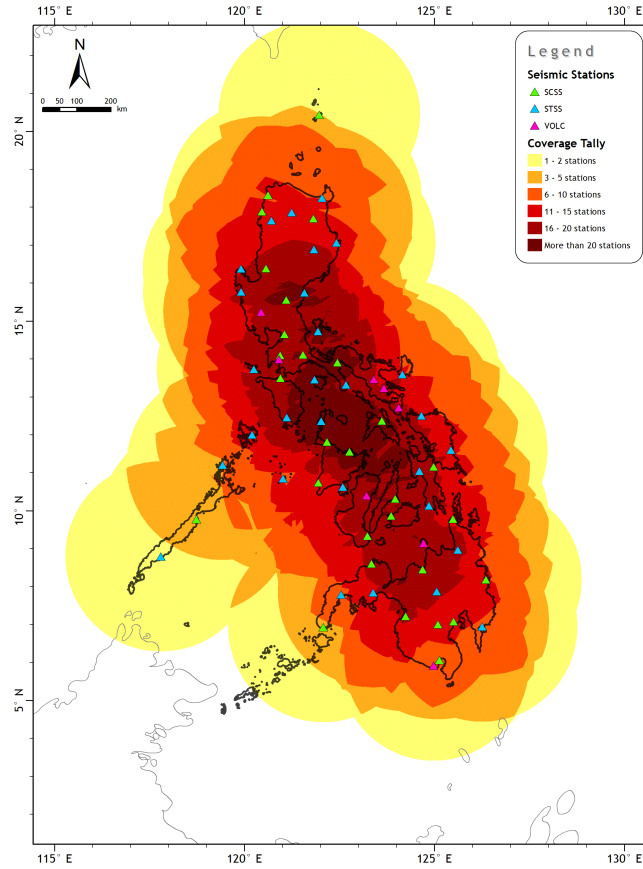


Event Detectability

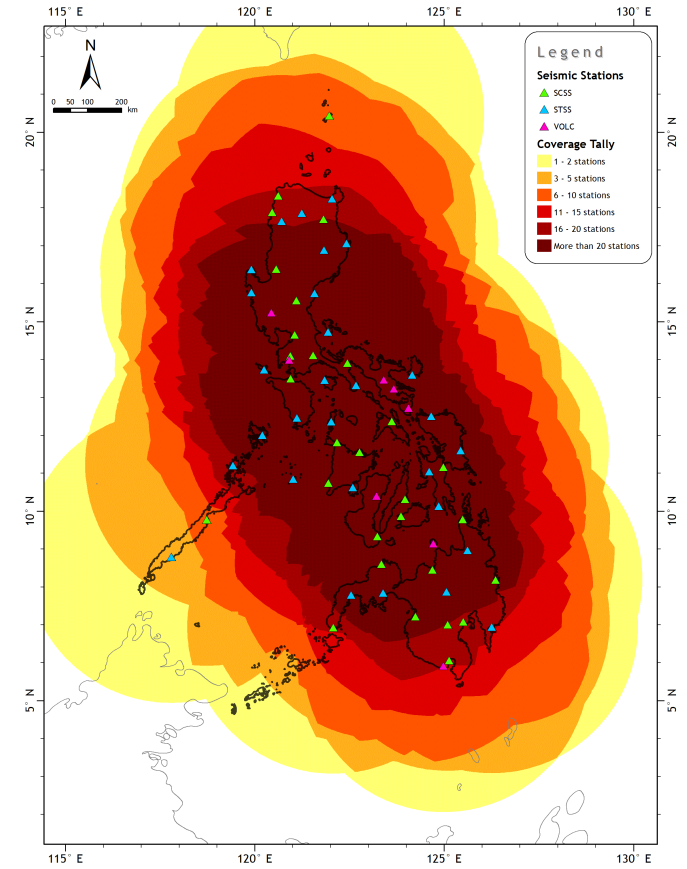
2011 PHILIPPINE SEISMIC NETWORK
Detection Capability (Ms 2.0)



2011 PHILIPPINE SEISMIC NETWORK
Detection Capability (Ms 3.0)



2011 PHILIPPINE SEISMIC NETWORK
Detection Capability (Ms 4.0)



Commissioned Seismic Stations



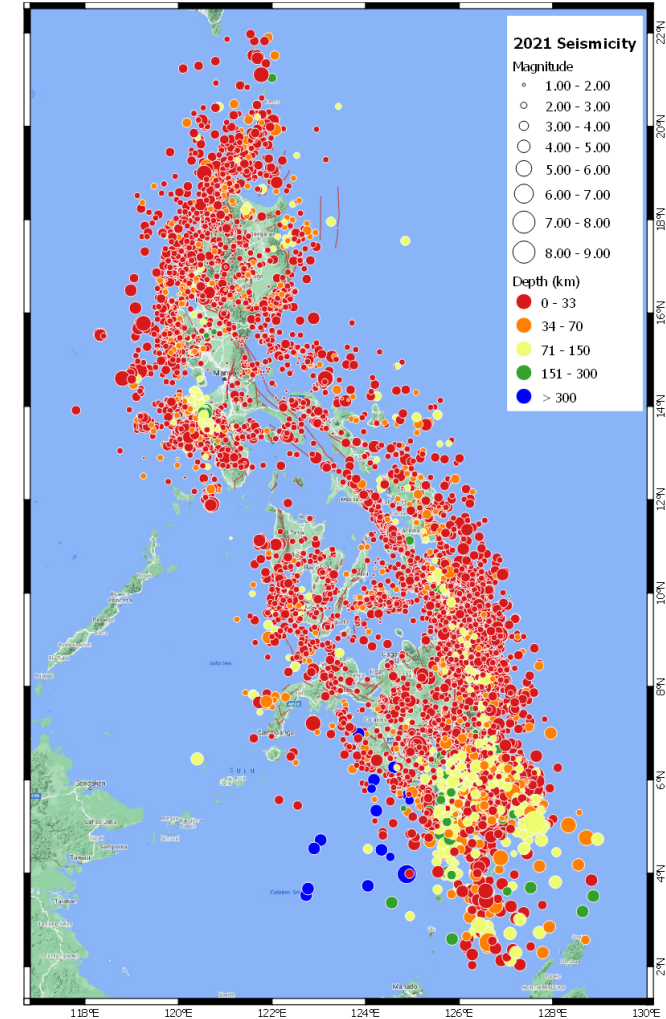
Station Code: SPEP
Location: San Policarpo, Eastern Samar



Station Code: SZNP
Location: Siocon, Zamboanga del Norte



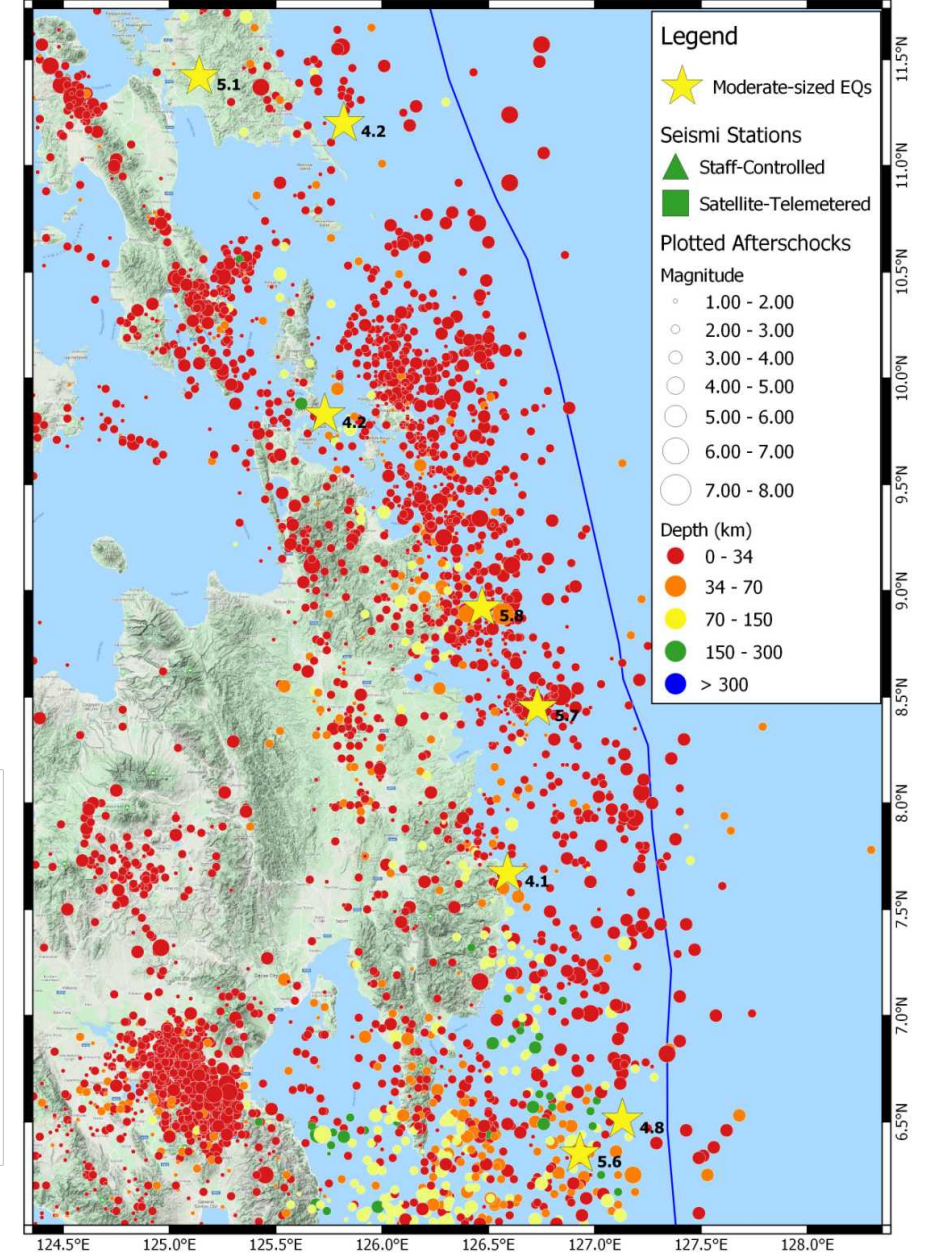
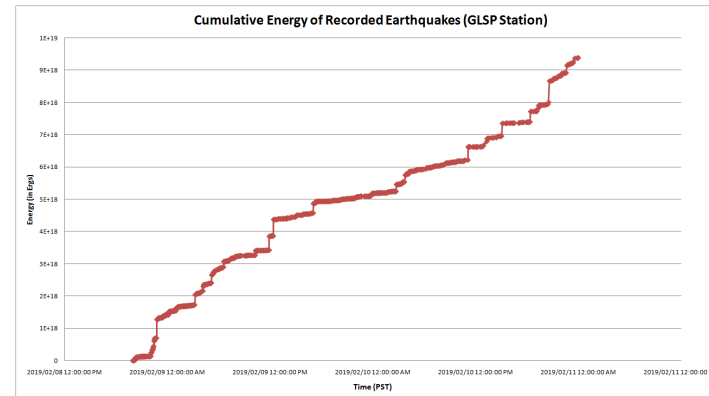
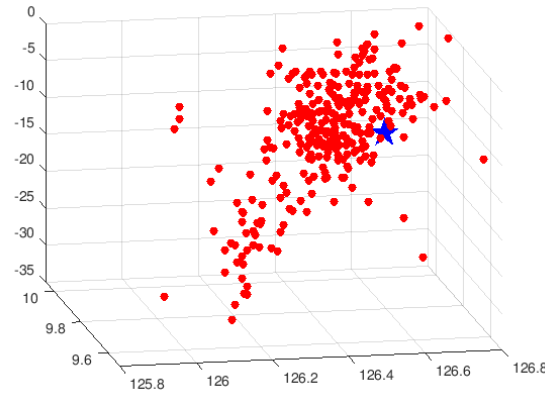
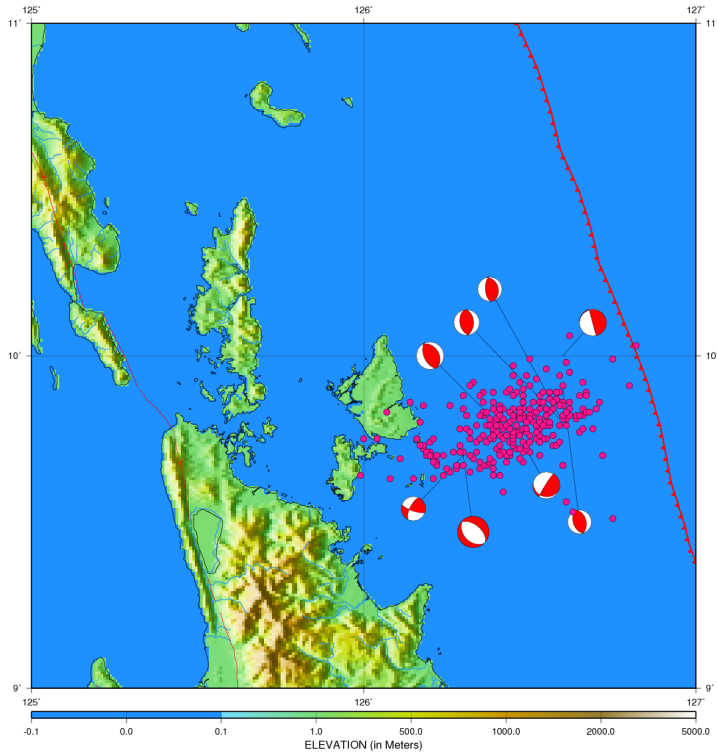
Station Code: GORP
Location: Gloria, Oriental Mindoro



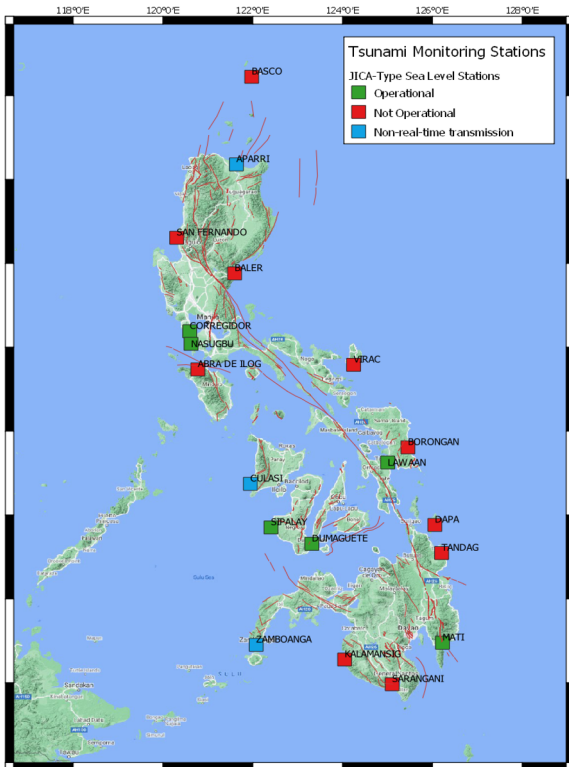
PHIVOLCS Mindanao Cluster Center for Earthquake and Tsunami (PMCMCET)



Earthquake Patterns



Sea-Level Monitoring Stations



12 Aug 2021 M7.1 Offshore Mati

Date:

12 Aug 2020

Time :

01:46 AM PST

Coordinates:

04.98°N, 124.01°E

Depth:

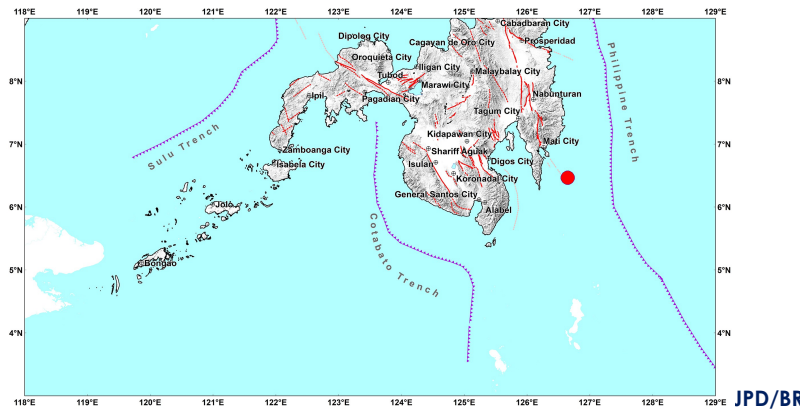
013 km

Magnitude:

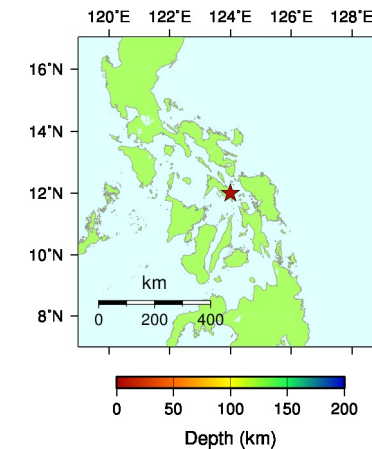
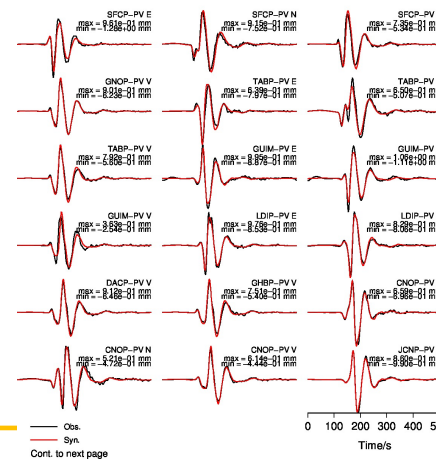
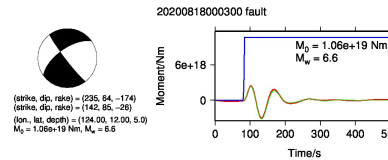
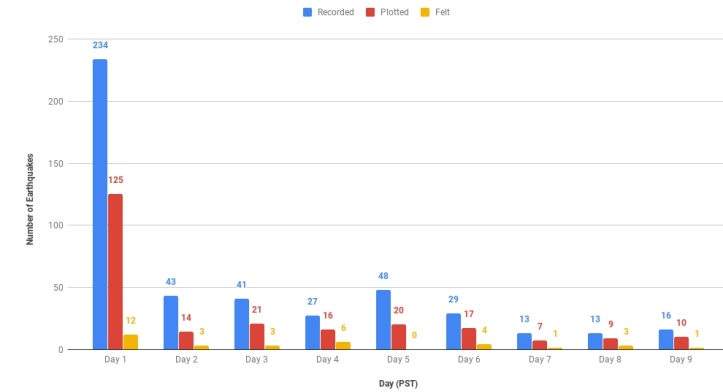
M 7.1

Location:

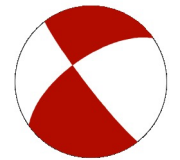
022 km S 20° E of General Generoso (Davao Oriental)



18 August 2020 M6.6 Masbate Earthquake
Earthquake Daily Count



SWIFT Centroid Moment Tensor Solution:



Moment magnitude (M_w) = 6.6

Seismic moment (M_0) = 1.06×10^{19} Nm

(Lon, Lat, Depth) = (124.00°E, 12.00°N, 5 km)

(Strike 1, Dip 1, Rake 1) = (235°, 64°, -174°)

(Strike 2, Dip 2, Rake 2) = (142°, 85°, -26°)

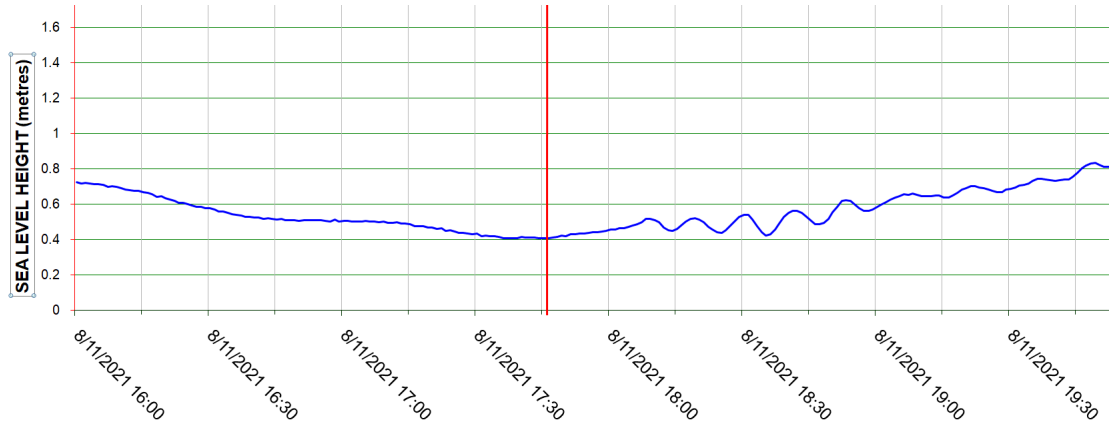
Recorded	464
Plotted	239
Felt	33
Mag. Range	1.6 - 5.1
Ref. Station	CNPS



Department of Science and Technology
Philippine Institute of Volcanology and Seismology

ICG/P IWS 10th Meeting of the Regional Working Group on Tsunami Warning and Mitigation in the South China, 28 and 30 September 2021

12 Aug 2021 M7.1 Offshore Mati



Mati Sea Level Statuin

	A	B	C	D	E
1	Date and Time	Sea Level Height (m)		H-Crest to Trough (m)	H-Crest to Trough (cm)
2	8/11/2021 17:46	0.4092	Event Time		
25	8/11/2021 18:09	0.5178	1st wave (Crest)	0.0688	6.88
30	8/11/2021 18:14	0.449	1st wave (Trough)		
35	8/11/2021 18:19	0.5191	2nd wave (Crest)	0.0823	8.23
41	8/11/2021 18:25	0.4368	2nd wave (Trough)		
46	8/11/2021 18:30	0.5412	3rd wave (Crest)	0.1183	11.83
51	8/11/2021 18:35	0.4229	3rd wave (Trough)		
58	8/11/2021 18:42	0.5621	4th wave (Crest)	0.0773	7.73
63	8/11/2021 18:47	0.4848	4th wave (Trough)		
69	8/11/2021 18:53	0.6238	5th wave (Crest)	0.0619	6.19
74	8/11/2021 18:58	0.5619	5th wave (Trough)		

Station metadata

- Code: davo
- Country: Philippines
- Location: Davao_PH
- Status: Operational
- Local Contact: National Mapping and Resource Information Authority (Philippines)
- Other Contact: University of Hawaii Sea Level Center (USA)
- GLOSS ID: 71 [goto handbook]
- QC data: UHSLC 372 (1984-2018), PSMSL 537 (1948-2019)
- Latitude: 7.1537
- Longitude: 125.6629
- Connection: GTS message
- GTS message type: SWPH41

Sensors:

- Sensor 1:** Type of sensor: prs (pressure), Sampling rate: 1
- Sensor 2:** Type of sensor: rad (radar), Sampling rate: 1
- Sensor 3:** Type of sensor: enc (float sensor with encoder), Sampling rate: 6
- Sensor 4:** Type of sensor: sw1 (1st switch), Sampling rate: 60
- Sensor 5:** Type of sensor: sw2 (2nd switch), Sampling rate: 60
- Sensor 6:** Type of sensor: bat (battery), Sampling rate: 6

Sealevel at Davao_PH station (offset: 7.563 m)

Graph showing sea level height (meters) vs. time (09:00 to 19:00 Aug 11). Legend: enc (float sensor with encoder), prs (pressure), rad (radar).

Period: 12h, day, 7 days, 30 days

Signals: prs, rad, enc, Remove outliers, Remove spikes

Data: Relative levels= signal - average over selected period, Absolute levels= as received, Offset signals= relative signals + offset, Show switch data, Show battery voltage



Released Tsunami Information

PHIVOLCS TSUNAMI INFORMATION



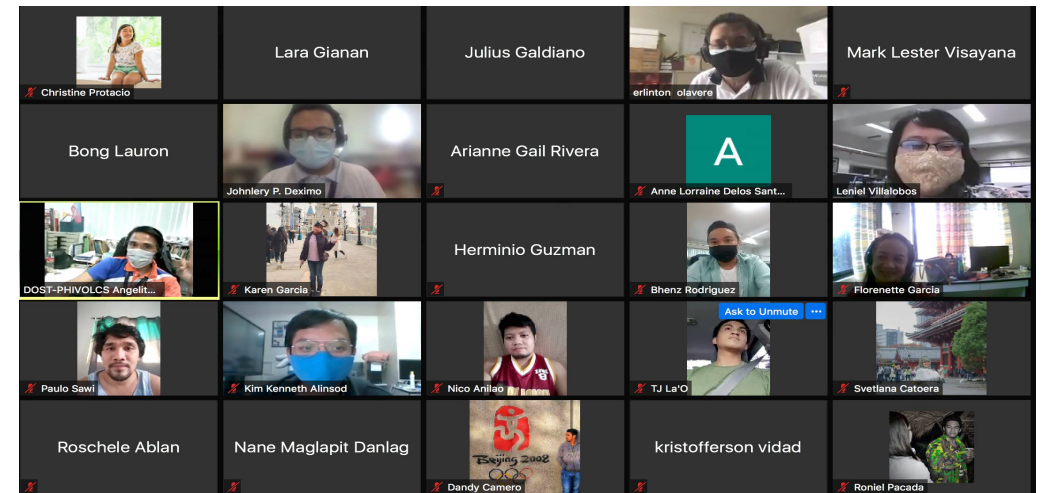
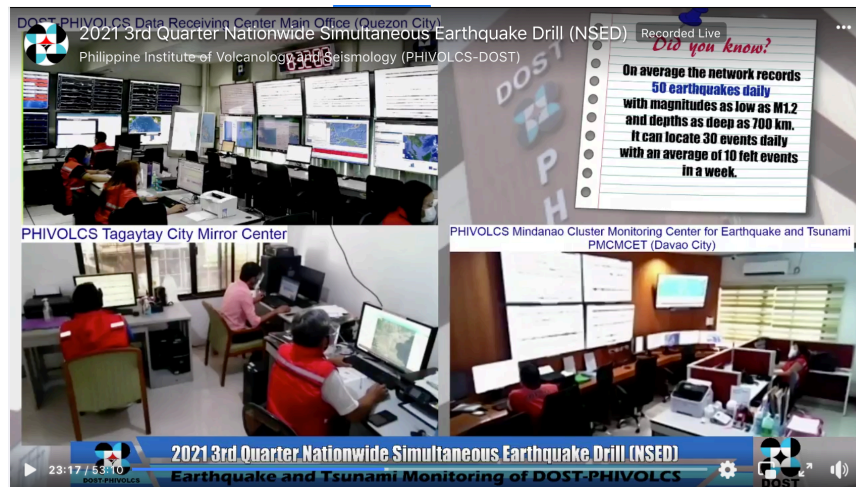
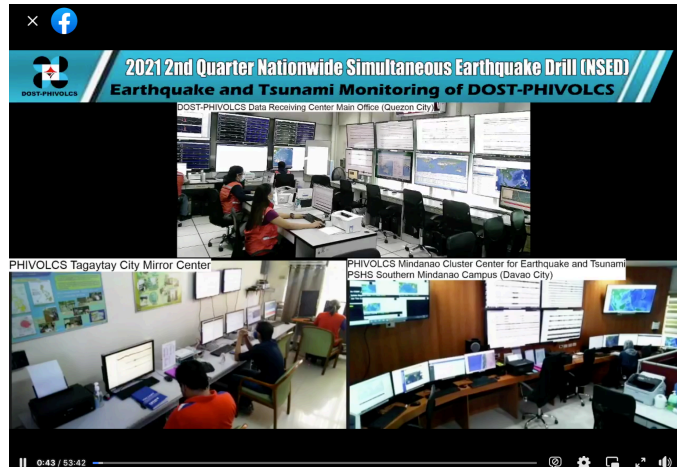
○ Latest Earthquake Event ● Earthquake Events for the year

<https://tsunami.phivolcs.dost.gov.ph>

Date and Time(PST)	Latitude	Longitude	Depth	Magnitude	Location	Advisory
21 Sep 2021 - 04:25 AM	45.80°N	153.50°E	35	6.5	East Of Kuril Islands	Tsunami Information # 1
08 Sep 2021 - 09:48 AM	17.10°N	99.60°W	050	7.4	Guerrero, Mexico	Tsunami Information # 1
31 Aug 2021 - 10:53 AM	30.10°S	176.60°W	40	6.5	Kermadec Islands Region	Tsunami Information # 1
18 Aug 2021 - 06:10 PM	14.90°S	166.90°E	084	7.1	Vanuatu	Tsunami Information # 1
14 Aug 2021 - 07:57 PM	55.40°N	157.80°W	032	7.0	Alaska Peninsula	Tsunami Information # 1
12 Aug 2021 - 01:46 AM	6.46°N	126.65°E	069	7.3	Offshore of Davao Oriental	Tsunami Information # 1
29 Jul 2021 - 02:15 PM	55.50°N	157.90°W	017	8.2	Alaska Peninsula	Tsunami Information # 2
29 Jul 2021 - 02:15 PM	55.50°N	157.90°W	018	8.1	Alaska Peninsula	Tsunami Information # 1
26 Jul 2021 - 08:09 PM	0.81°S	122.06°E	030	6.6	Sulawesi, Indonesia	Tsunami Information # 1
24 Jul 2021 - 04:49 AM	13.69°N	120.61°E	116	6.7	Offshore of Batangas	Tsunami Information # 1
22 Jul 2021 - 05:15 AM	7.40°N	82.50°W	034	7.0	South Of Panama	Tsunami Information # 1
10 Jul 2021 - 08:43 AM	03.19°N	126.78°E	070	6.1	Talau Islands, Indonesia	Tsunami Information # 1
21 Jun 2021 - 01:06 AM	30.20°S	177.30°W	051	6.7	Kermadec Islands New Zealand	Tsunami Information # 1
22 May 2021 - 06:13 AM	16.40°S	177.00°W	010	6.8	Fiji Region	Tsunami Information # 1
01 May 2021 - 09:27 AM	38.10°N	141.80°E	056	6.6	Near The East Coast Of Honshu, Japan	Tsunami Information # 1
01 Apr 2021 - 05:56 PM	30.10°S	176.40°W	105	6.6	Kermadec Islands Region	Tsunami Information # 1
20 Mar 2021 - 05:09 PM	38.40°N	141.70°E	060	7.2	Near East Coast Of Honshu, Japan	Tsunami Information # 1
17 Mar 2021 - 02:38 AM	54.60°N	163.10°E	057	6.9	Off the East Coast of Kamchatka, Russia	Tsunami Information # 1
05 Mar 2021 - 03:28 AM	29.60°S	176.00°W	010	8.0	Kermadec Islands Region	Tsunami Information # 1
05 Mar 2021 - 01:41 AM	29.80°S	177.20°W	010	7.5	Kermadec Islands New Zealand	Tsunami Information # 1
04 Mar 2021 - 09:27 PM	37.80°S	179.50°W	010	7.3	East of North Island New Zealand	Tsunami Information # 1
16 Feb 2021 - 08:49 AM	17.80°S	167.80°E	014	6.7	Vanuatu Islands	Tsunami Information # 1
13 Feb 2021 - 10:07 PM	37.70°N	141.80°E	058	7.1	Near the East Coast of Honshu Japan	Tsunami Information # 1
10 Feb 2021 - 09:20 PM	23.10°S	171.50°E	033	7.9	Southeast of Loyalty Islands	Tsunami Information # 1
24 Jan 2021 - 07:37 AM	62.00°S	55.30°W	010	7.3	South Shetland Islands	Tsunami Information # 1
21 Jan 2021 - 08:23 PM	4.92°N	127.44°E	116	7.1	Offshore Davao Occidental	Tsunami Information # 1
19 Jan 2021 - 10:46 AM	32.00°S	68.70°W	010	6.6	San Juan, Argentina	Tsunami Information # 1



Exercises and Drills



Information Platform

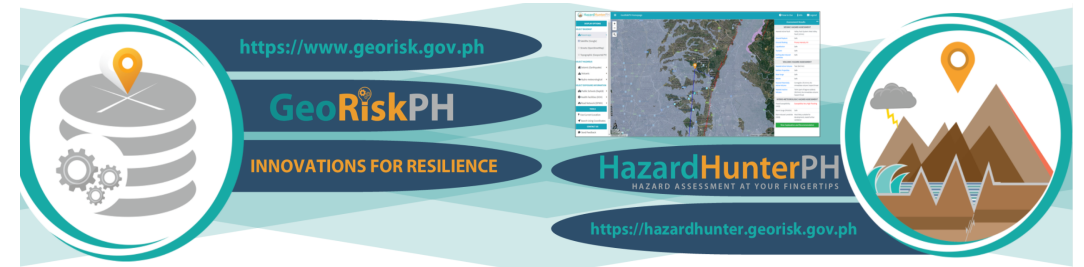


VolcanoPH INFO
MOBILE APPLICATION

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VolcanoPH INFO
DOST-PHIVOLCS



<https://www.georisk.gov.ph>

GeoRiskPH
INNOVATIONS FOR RESILIENCE

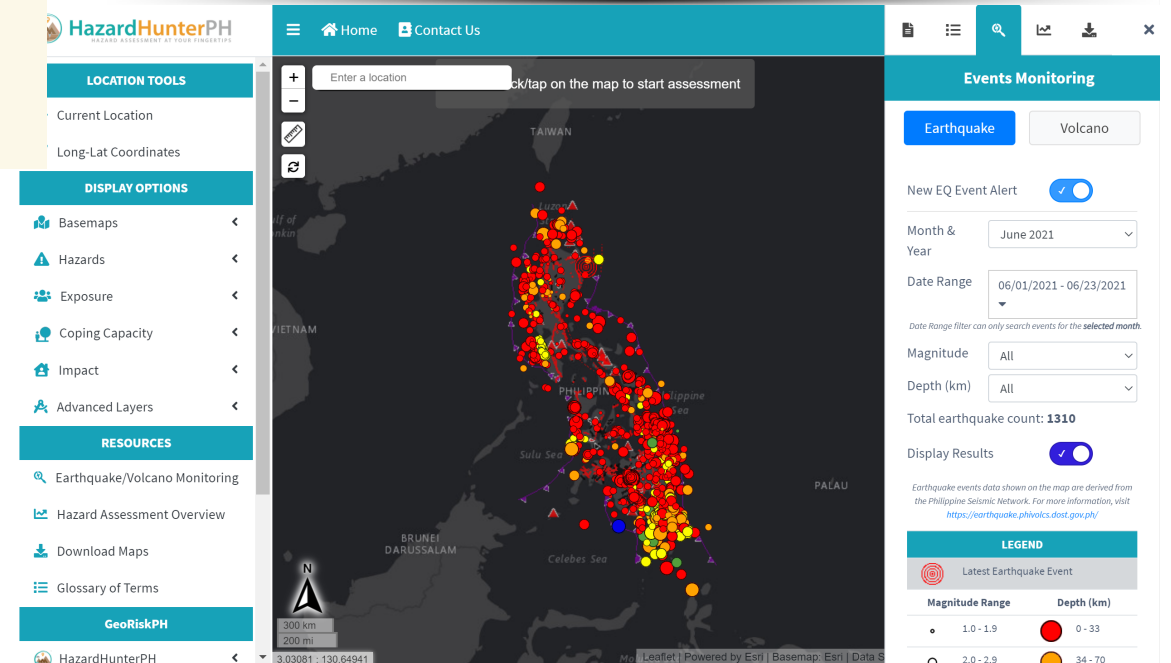
HazardHunterPH
HAZARD ASSESSMENT AT YOUR FINGERTIPS

<https://hazardhunter.georisk.gov.ph>



HOW SAFE IS MY HOUSE?
Self-check for Earthquake Safety
of Concrete Hollow Block (CHB) Houses
in the Philippines

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HazardHunterPH
HAZARD ASSESSMENT AT YOUR FINGERTIPS

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LOCATION TOOLS
Current Location
Long-Lat Coordinates

DISPLAY OPTIONS
Basemaps
Hazards
Exposure
Coping Capacity
Impact
Advanced Layers

RESOURCES
Earthquake/Volcano Monitoring
Hazard Assessment Overview
Download Maps
Glossary of Terms

GeoRiskPH
HazardHunterPH

Events Monitoring
Earthquake Volcano
New EQ Event Alert
Month & Year: June 2021
Date Range: 06/01/2021 - 06/23/2021
Total earthquake count: 1310
Display Results

LEGEND
Latest Earthquake Event
Magnitude Range: 1.0 - 1.9, 2.0 - 2.9
Depth (km): 0 - 33, 34 - 70



PHIVOLCS Mindanao Cluster Center for Earthquake and Tsunami (PMCCET)

PHIVOLCS Building, Inside PSHS-
SMC, Tugbok District, Brgy. Sto
Niño, Davao-Bukidnon road, Davao
City, Philippines, 8000

Tel no. : +6382 293-0008

Email: pmccet.docs@gmail.com

www.phivolcs.dost.gov.ph



/PHIVOLCS



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Tel. Numbers

+632 8929-9254

+632 8426-1468 loc 124 / 125

Fax number

▶ +632 8927-1087

Volcano (24/7):

Tel. Numbers

▶ +632 8426-1468 loc 127

Telefax number

▶ +632 8927-1095

IEC materials:

▶ +632 8426-1468 loc 128

▶ +632 8927-4524

