

# **Report from Northwest Pacific Tsunami Advisory Center (NWPTAC)**

Northwest Pacific Tsunami Advisory Center (NWPTAC)  
Japan Meteorological Agency (JMA)

# NWPTAC Major Activities (Feb. 2019 – Nov. 2020)

- Feb. 28, 2019 Full changeover to NWPTA Enhanced Products including Graphical Products.
- Nov. 5, 2019 Termination of the interim service for the South China Sea region (The full operation of SCSTAC started.) Area of Services (AoS) was changed
- Jul. 14, 2020 Communications Test
- Oct. 29, 2020 TSPs Coordination Meeting (PTWC, NWPTAC, SCSTAC, CATAAC)
- Nov. , 2020 The JMA moved to the new building. The NWPTAC started its operation at the new building of the JMA.



New building of JMA



Operation room of the new building

# NWPTAC Major Activities (Nov. 2020 – Nov. 2021)

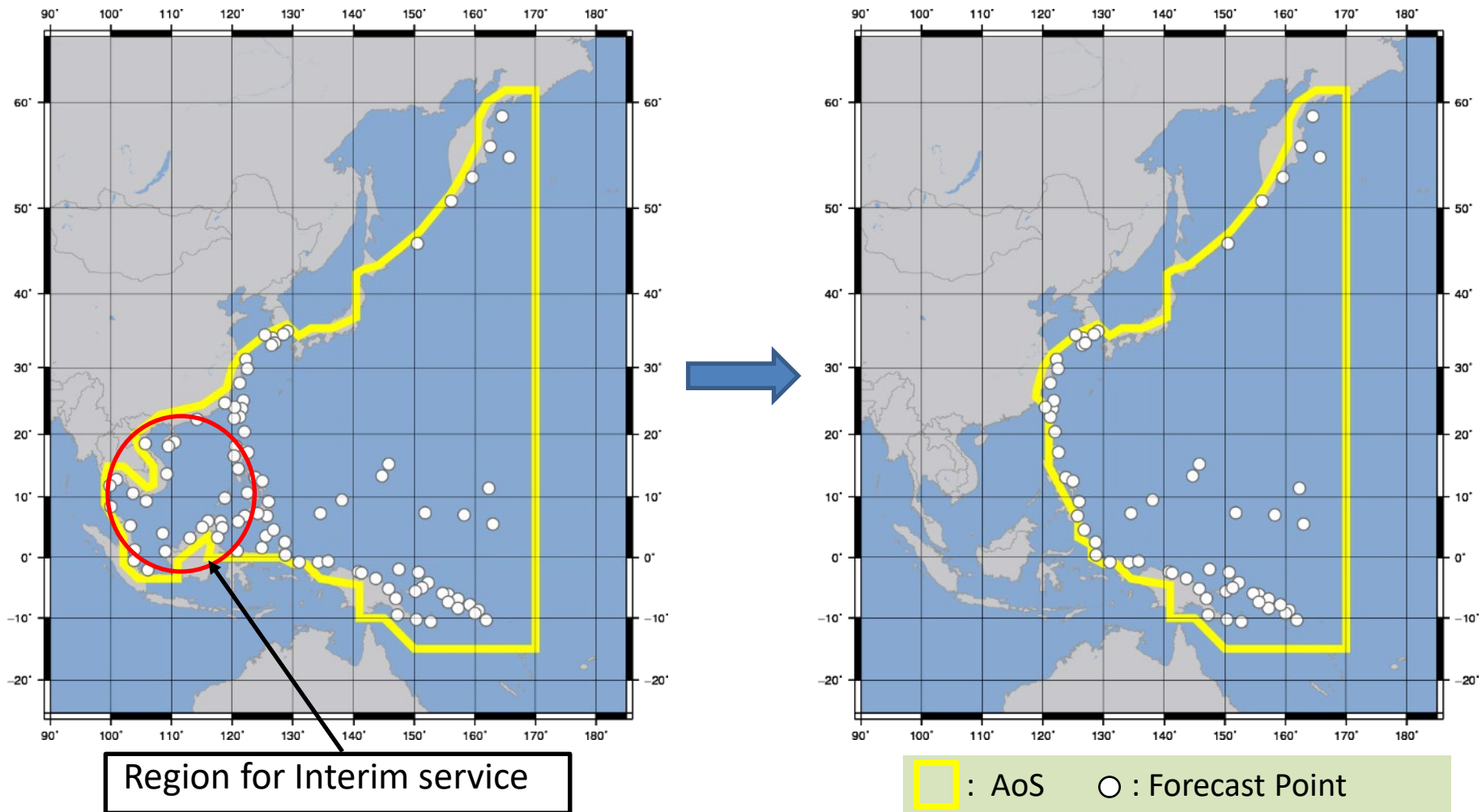
Nov. 15, 2020 Communications Test for the PacWave20

Feb. 15, 2021 Communications Test

Aug. 3, 2021 Communications Test

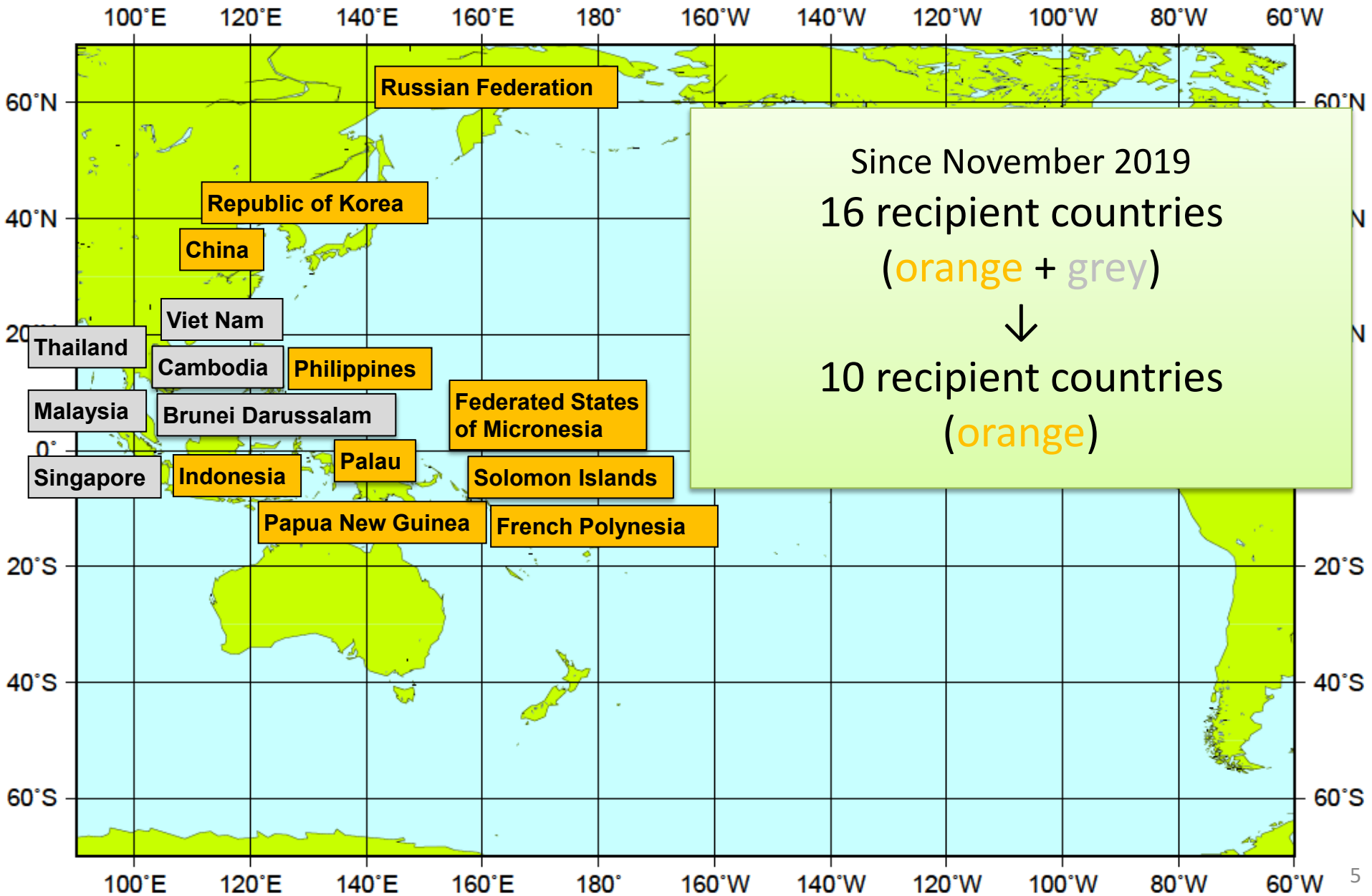
**\*)The NWPTAC has continued operation despite the pandemic of COVID-19.**

# NWPTAC Area of Service (AoS)



The NWPTAC AoS was changed when the full operation of SCSTAC started in November 2019.

# NWPTA Recipient Countries



# NWPTA Issuance (April 2019 – May 2020)

	Date	Time (UTC)	Lat./Lon.	Location	Mag	T1*1	T2*1
1	Apr. 23, 2019	05:38	11.9N/125.2E	Philippines	6.6	20	46
2	May 06, 2019	21:20	07.0S/146.4E	PNG	7.1	22	-
3	May 14, 2019	12:58	04.2S/152.5E	PNG	7.7	21	-
4	Jun. 25, 2019	09:06	56.2N/164.3E	Komandorsky Islands	6.6	19	47
5	Jun. 28, 2019	15:52	19.9N/144.9E	Mariana Islands	6.5	14	-
6	Jul. 07, 2019	15:08	00.6N/126.2E	Molucca Sea	6.9	31	-
7	Jul. 27, 2019	18:31	33.0N/137.4E	Japan	6.5	12	-
8	Oct. 16, 2019	11:37	06.8N/125.1E	Philippines	6.7	22	-
9	Oct. 29, 2019	01:05	06.9N/125.2E	Philippines	6.8	18	47
10	Oct. 31, 2019	01:11	07.1N/125.3E	Philippines	6.8	16	-
11	Nov. 14, 2019	16:18	01.5N/126.4E	Molucca Sea	7.4	20	47
12	Dec. 15, 2019	06:12	06.7N/125.3E	Philippines	6.9	18	-
13	Feb. 13, 2020	10:33	44.7N/148.9E	Japan	7.0	7	-
14	Mar. 25, 2020	02:49	49.0N/157.7E	Kuril Islands	7.8	27	55*2
15	Apr. 18, 2020	08:25	27.2N/140.7E	Japan	6.9	10	-
16	May 12, 2020	22:41	12.1S/166.5E	Santa Cruz Islands	6.6	15	-

\*1) T1, T2: Elapsed time from Eq. origin time to Issuance 1<sup>st</sup>/2<sup>nd</sup> NWPTA Products (minutes)

\*2) Graphical products were provided.

# NWPTA Issuance (June 2020 – November 2021)

	Date	Time (UTC)	Lat./Lon.	Location	Mag	T1*	T2*
17	Jun. 04, 2020	08:50	02.9N/128.2E	Indonesia	6.7	15	-
18	Jul. 17, 2020	02:50	07.8S/147.7E	PNG	7.3	22	50
19	Aug. 18, 2020	00:04	12.1N/124.1E	Philippines	6.9	16	-
20	Sep. 06, 2020	15:24	06.3N/125.9E	Philippines	6.6	17	-
21	Oct. 08, 2020	07:36	06.1S/14.2E	PNG	6.7	15	-
22	Dec. 25, 2020	23:43	13.9N/120.5E	Philippines	6.5	20	-
23	Jan. 21, 2021	12:23	04.8N/127.4E	Indonesia	7.0	24	-
24	Feb. 13, 2021	14:07	37.7N/141.8E	Japan	7.1	14	39
25	Mar. 16, 2021	18:38	54.6N/163.1E	Kamchatka Peninsula	6.9	16	47
26	Mar. 20, 2021	09:09	38.4N/141.7E	Japan	7.2	6	48
27	May ,01, 2021	01:27	38.1N/141.8E	Japan	6.6	9	51
28	Jul. 23, 2021	20:49	13.8N/120.5E	Philippines	6.8	27	-
29	Aug. 11, 2021	17:46	06.5N/126.8E	Philippines	7.2	24	49
30	Aug. 18, 2021	10:10	14.9S/166.9E	Vanuatu Islands	7.1	20	-
31	Sep. 20, 2021	20:25	45.8N/153.5E	Kamchatka Peninsula	6.5	11	-
32	Oct. 15, 2021	02:45	08.9S/158.4E	Solomon Islands	6.6	21	-
33	Nov. 10, 2021	1545	23.3N/126.6E	Southeast of Ryukyu Islands	6.6	15	59

\*) T1, T2: Elapsed time from Eq. origin time to Issuance 1<sup>st</sup>/2<sup>nd</sup> NWPTA Products (minutes)

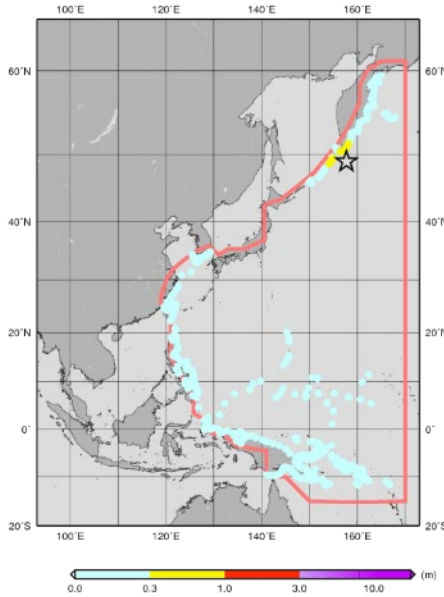
# Graphical Products for No. 14 event

## NWPTAC Coastal Tsunami Amplitude Forecast

This map shows the largest maximum coastal amplitudes of two forecasts based on a conjugate fault set obtained from CMT analysis. Values are shown in meters from the undisturbed sea level to the crest.


Actual coastal amplitudes at the coast may differ from forecasts due to forecasting uncertainties and local topography.

Information bulletins provided by the Northwest Pacific Tsunami Advisory Center (NWPTAC) should not be construed as official warnings or evacuation notices for the areas concerned. The issuance of actual evacuation notices is the responsibility of individual local authorities.



**Earthquake:**  
25 Mar 2020 02:49:00(UTC)  
Lat: 49.0°N  
Lon: 157.7°E

Mw: 7.5  
Earthquake Mechanism:



**Fault1**  
Strike: 26°  
Dip: 42°  
Rake: 91°

**Fault2**  
Strike: 204°  
Dip: 48°  
Rake: 89°

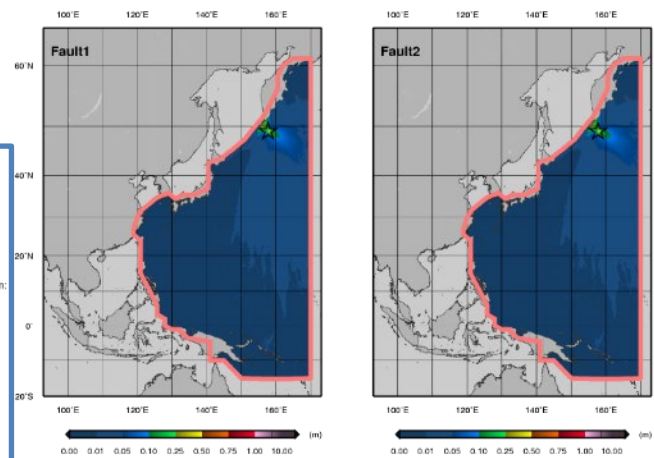
**model run at:**  
25 Mar 2020 03:42:00(UTC)

## NWPTAC Deep-Ocean Tsunami Amplitude Forecast

The amplitudes shown on these maps are maximum values in meters from the undisturbed sea level to the crest.


Maps should not be used to estimate coastal tsunami amplitudes or impacts. Deep-ocean tsunami amplitudes are usually much smaller than coastal amplitudes.

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**Earthquake:**  
25 Mar 2020 02:49:00(UTC)  
Lat: 49.0°N, Lon: 157.7°E

Mw: 7.5  
Earthquake Mechanism:



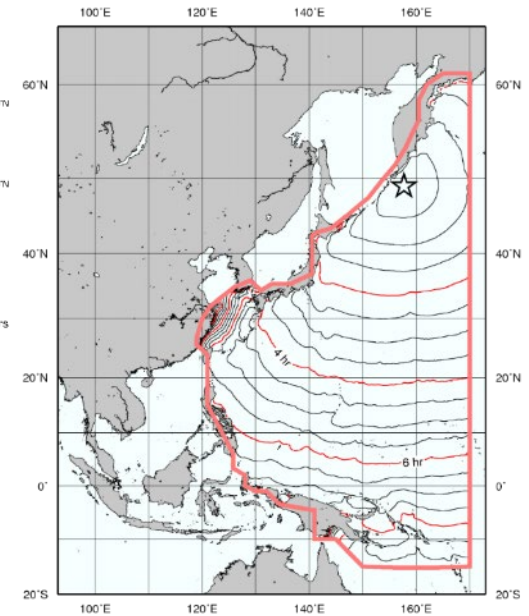
**Fault1** Strike: 26°, Dip: 42°, Rake: 91°  
**Fault2** Strike: 204°, Dip: 48°, Rake: 89°

**model run at:**  
25 Mar 2020 03:42:00(UTC)

## NWPTAC Tsunami Travel Time Forecast

Actual coastal arrival times may differ from forecasts, and initial waves may not be the largest.

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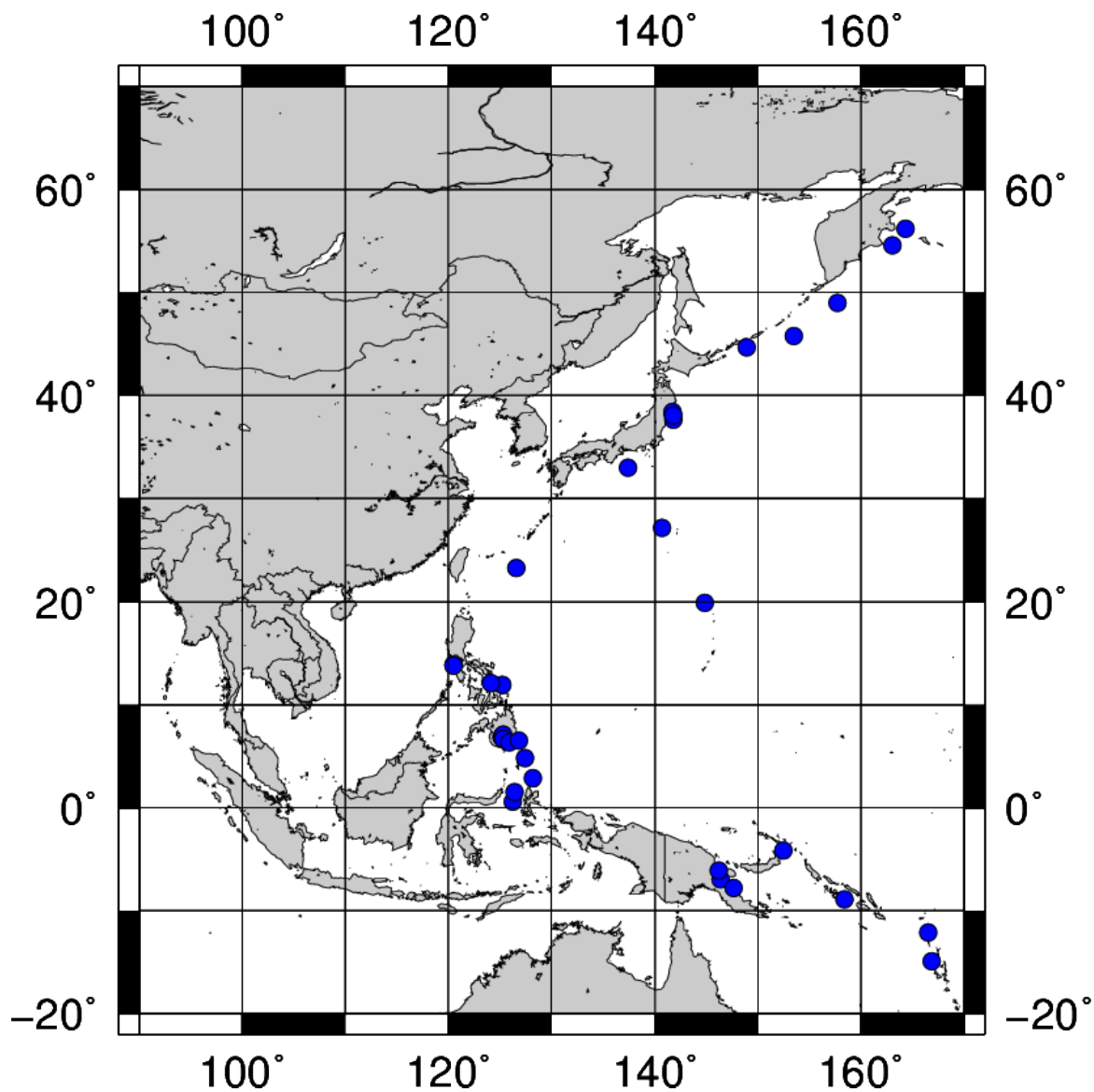
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Centroid moment tensor solution used for making graphical products



# Earthquake locations for which NWPTA were Issued (Apr. 2019 – Nov. 2021)

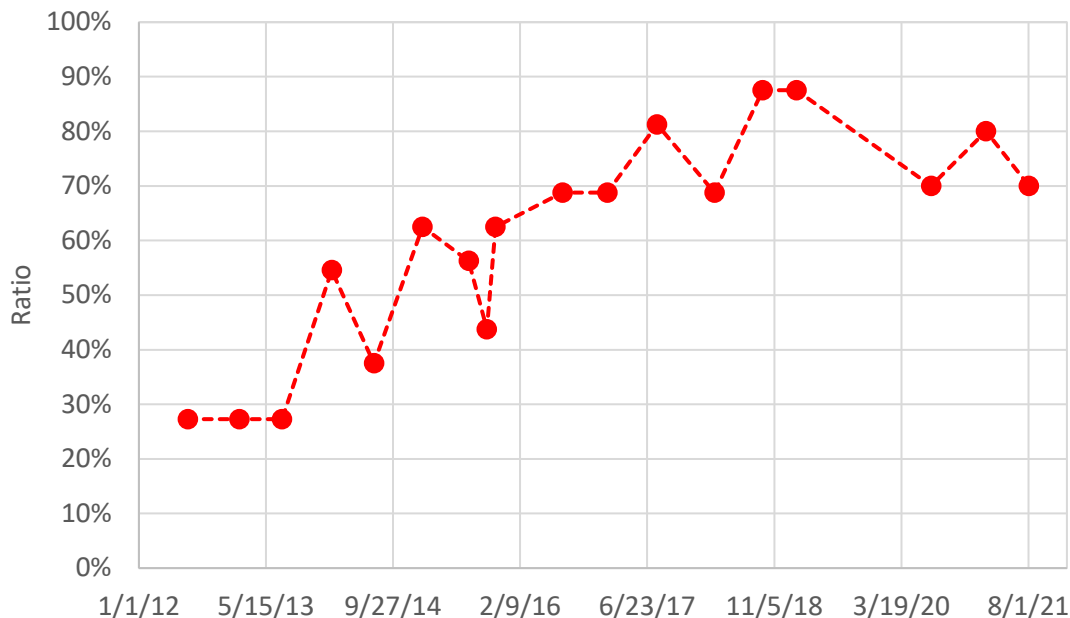


- issued for 33 events

# Communication Tests

NWPTAC conducts communication tests basically twice a year since 2012. Thanks to the coordination of the secretariat and the member states, the situation seems to be becoming better.

Temporal changes of response ratio



Date	Number of responses	Number of recipients	Response Ratio
2012/7/11	3	11	27%
2013/1/30	3	11	27%
2013/7/17	3	11	27%
2014/1/29	6	11	55%
2014/7/14	6	16	38%
2015/1/21	10	16	63%
2015/7/22	9	16	56%
2015/10/1	7	16	44%
2015/11/4	10	16	63%
2016/7/25	11	16	69%
2017/1/17	11	16	69%
2017/8/1	13	16	81%
2018/3/15	11	16	69%
2018/9/20	14	16	88%
2019/1/31	14	16	88%
2019/11/5	#N/A	10	#N/A
2020/7/14	7	10	70%
2021/2/15	8	10	80%
2021/8/3	7	10	70%

(#N/A) Because the test was also designed to ensure the system adjustment for the new AoS and the purpose was beyond the usual communications test, we didn't ask for responses.

Thank you very much for your kind attention.