



Post-Event Briefing, M8.8 Kamchatka Earthquake and Tsunami
Intergovernmental Coordination Group for the
Pacific Tsunami Warning Mitigation System (ICG/PTWS)
13 August 2025, 2200-2330 UTC
Virtual

M8.8 Kamchatka Tsunami Event Overview

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Highlights (reports available)

- 6th largest earthquake in History.
Near to 1952 M9.0 earthquake that generated a destructive Pacific-wide tsunami.
Largest 1960 M9.5 Chile earthquake and tsunami that established the PTWS (ITSU) in 1965
- 1st Pacific-wide tsunami since 2011 M9.1 Great East Japan earthquake and tsunami
- PTWS Tsunami Service Providers issued 1st Threat Message 10 min after Earthquake Origin Time. **PTWC** monitored and issued 24 threat forecast information bulletins until waves hit Chile, 26 hours later. **NWPTAC** issued 15 bulletins for 20 hrs
- National Tsunami Warning Centres issued alerts prompting localized evacuations
 - Warnings: **Russia, Japan, USA, Pacific Island Countries** (**French Polynesia**, Cook Islands, Tonga, Papua New Guinea), South America (**Ecuador, Chile**)
- Tsunami monitoring by DART systems, coastal sea level stations (**IOC SLMF, PTWC Tide Tool**)
 - 5 DART systems NW Pacific triggered, and used to calibrate forecasts – largest 0.9 m ampl
 - > 100 tsunami measurements on coastal gauges – largest 1.74 m, Kahalui, Maui, Hawaii
- Earthquake was thrust/reverse faulting, but rupture was complex.
Initial earthquake magnitude of M8.0 upgraded to M8.7/8.8, updating tsunami forecast.
Later processing (finite fault solution) showed 2 bursts of rupture. (**PTWS WG 2, NZ**)



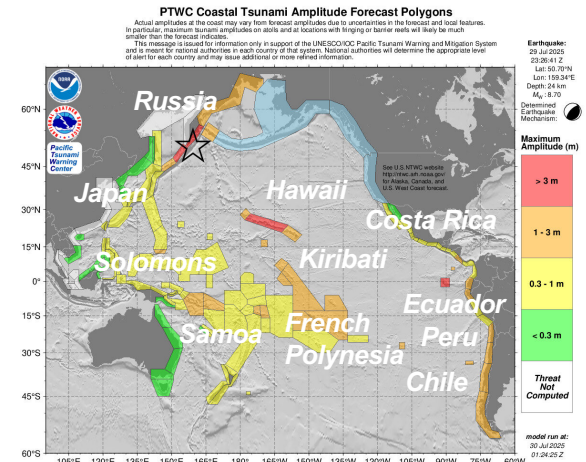
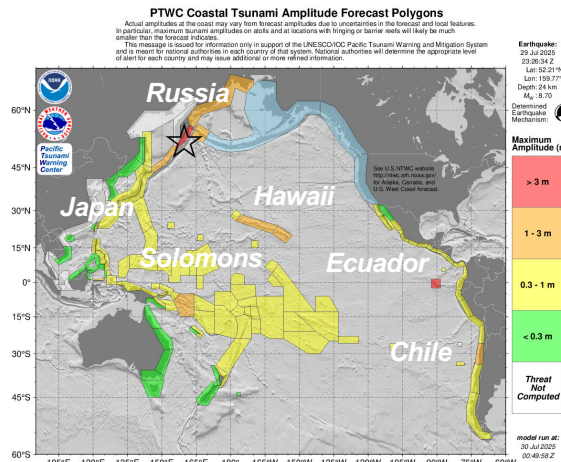
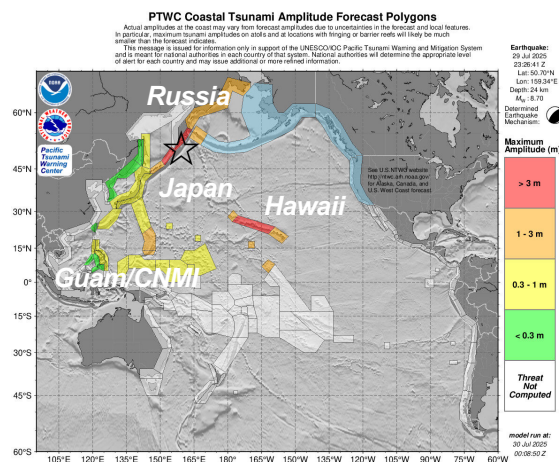
PTWS Tsunami Forecasts - PTWC

- ❑ Earliest forecasts sufficient to trigger national decision-making (warning, evacuation) for countries at regional distances
- ❑ Essential to be conservative and err on the side of public safety

Msg 2 M8.7 (+42 min)
ETA (hr): Japan (2) Guam (5.5),
Hawaii (6)

Msg 3 (+1:31 hr, M8.7)
ETA (hr): Solomons (8.5),
Galapagos (16), Chile (18)

Msg 4 (+2:12 hr, M8.8)
ETA (hr): Kanton, KI (8), Samoa (9.5), FP
(11), Costa Rica (14.5), South Amer (16+)

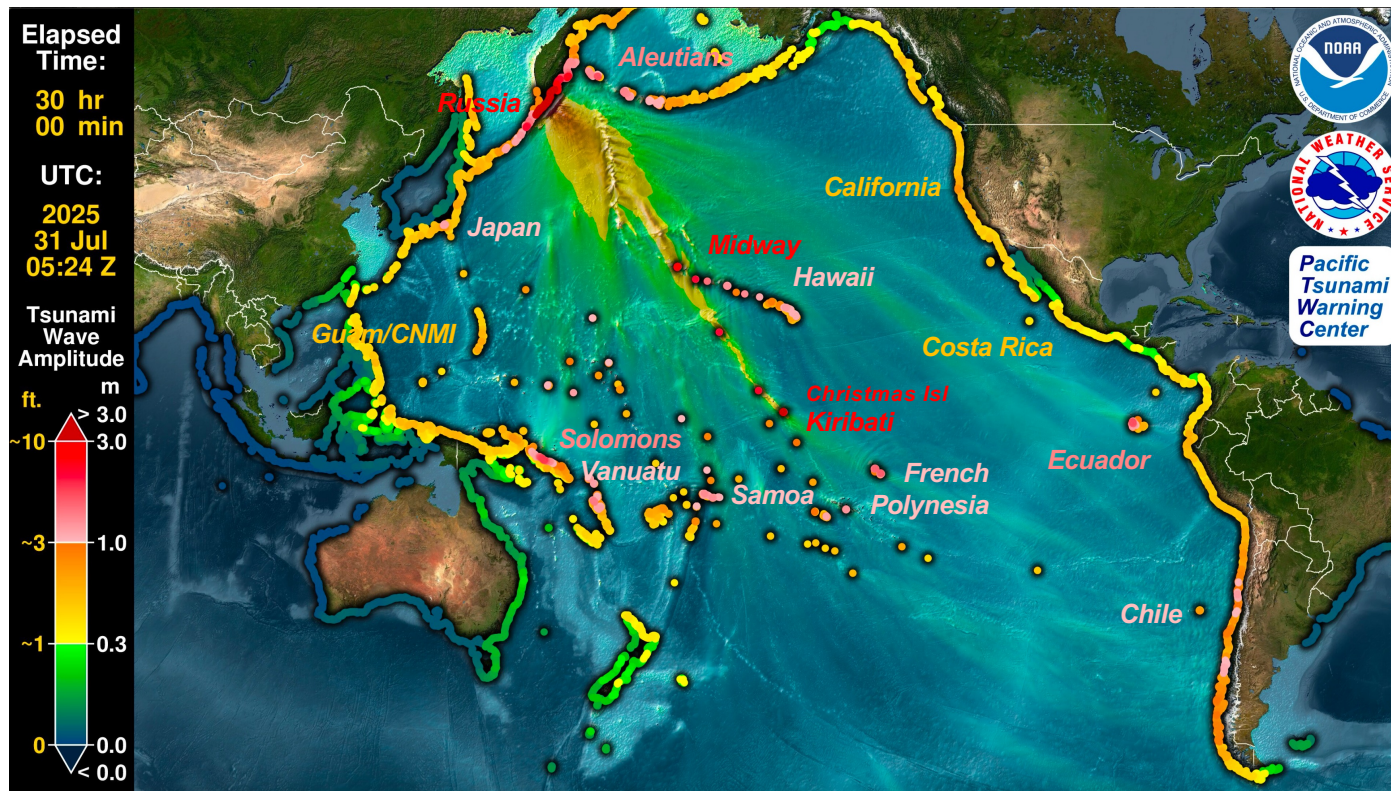


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PTWC Forecasts – USGS Finite Fault Solution

* Done post-event



<https://www.youtube.com/watch?v=5X3bF1tCw7s>



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Thank You

Muchas Gracias

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