

**Exercise Pacific Wave 2022 - Pacific Island Countries and Territories (PICT):
Cold Wash and Debrief**

16 November 2022, 2300 UTC to 17 November 2022, 0030 UTC

Meeting Site: <https://oceanexpert.org/event/3691#overview>

NOTES - COMPILED BY ITIC

COUNTRY FEEDBACK

OBJECTIVE 1:

Test the Hunga Tonga Hunga Ha'apai (HTHH) PTWC Interim Procedures and PTWS Products ([IOC Circular Letter 2902](#)) and whether the HTHH PTWS products are interpreted PICT Member States accurately and in a timely manner

Tonga NTWC

- PTWC products good. Capture event. Scaled forecast heights useful for issuing warning, upgrade/downgrade, cancellation
- Tonga debrief – gaps for action
 - HF radio comms. Consider to be cornerstone for their exercise, regular testing is important. Thanked Fiji NDMO for testing (receiving calls and passing information)
 - Consider cross fertilization between National and Regional exercises

Nauru NES / NDMO

- Multi-stakeholder exercise simulating real event. Shared many photos/videos of their exercise.
- Comms essential – 7 methods, incl HF radio (not working), WhatsApp, E-mail, Phone call, SMS text, 2-way local hand-held radio.
- Nauru debrief
 - action to get HF radio working (waiting for technician to return to island)
 - want to keep WhatsApp for future use since useful
 - more training is required as well as broader participation of national stakeholders

Fiji NTWC

- WhatsApp good, simple, timely and gave idea, though not as detailed as E-mail. Visuals shared useful. Want to keep using. Tonga report of eruption used for 1st product before PTWC message
- E-mail – did not receive early messages since it went to SPAM (were using yahoo, gmail)
- TTT map useful (prepared beforehand)
- PTWC products
 - Timely (1st msg at 20 min).

- Noted PTWC only has Suva, but there are many other Fiji Islands that need information . How to get? The TTT map is helpful, but want to know how other Forecasts can be calculated. (ACTION)
- Need more Sea Level gauges in remote island for tsunami confirmation

New Caledonia NDMO/TWFP

- PTWC products
 - Simple, easy to use. ETA useful
 - Noted that heights in messages were not those from 15 Jan 2022 – why?
 - ETA – question ???? (not clear – what was it – Laura has emailed Celine to ask)

French Polynesia NTWC

- PTWC products
 - For 1st msg, only did to 3 hrs, but FP right at threshold. Request to extend reporting to 6 hrs (not 3 hrs). (ACTION)

OBJECTIVE 2:

Test regional communication and cooperation between PICT Member States, and the value of information sharing in facilitating national tsunami alert decision-making.

HF Radio

- Tonga, NC, Fiji all agreed on high value of HF Radio and want to continue checking and testing so that it is a regular comm method for Tsunami Info by countries. Will be good to list the frequencies that work in the Region.
 - Australia NTWC noted – how to standardize and coordinate – who is entity? who owns? Multiple comm methods needed, Multi-hazard application. is this a low-hanging fruit?
- IOC responded many different agencies in different countries – need to work on this.
UN Regionally = Telecomm Cluster lead is WFP (World Food Programme)

Fiji NDMO

- Will continue testing. Need to have short messages pre-prepared to be used for HF radio communication Concur with Tonga. Noted from 15 Jan, there were no comms but HF radio was one of first to be re-established as working

New Caledonia NDMO/TWFP

- exercise very good for training, and for developing and implementing SOPs
- WhatsApp – 1st time using, but plan to include as part of their Operations. Suggests limiting acknowledgement messages - they are not helpful and cause delays finding decisional information.
- HF Radio – useful, want to test regularly
 - Very Important to establish procedures for use in operation (ACTION)

Australia NTWC

- Both comm methods useful since gave very early indicator (Tonga sharing of eruption). Otherwise their SOPs say to consult VAAC (Darwin), which takes 1.5 hrs to confirm since need to wait for ash to get into troposphere).

Tonga NTWC

- May be useful to have Wellington VAAC as part of this tsunami comm info sharing?
- Need to establish PROTOCOL. Noted only HF Radio and Satellite Phone worked on 15 January

Niue NTWC

- No WhatsApp. Was Observer for Email.
- Noted Comms essential. Internet may go out, so Satellite phone is backup, but cost to maintain expensive (but required)

Samoa

- Realistic exercise since had only 2 in office, which is the normal case for a real event
- Prefer WhatsApp – simple, good interaction between others
- Email more detail but also more formal – had a delay
- Useful to learn other country SOPs since developing/strengthening theirs

Vanuatu

- Apologize. Due to power cut, could not play

French Polynesia

- Apologize. NDMO could not play due in real time due event crises, but reviewed afterward.
- Realize that for info sharing, esp for country, both NTWC and NDMO need to be on same group so they get at the same time directly.
- Continue to exercise. Demonstrated as usual for at least information regional sharing that helps decision-making

OBSERVER FEEDBACK

IOC, ITIC

- It was noted that non-intended spin-off was that the WA SWP group was available for use in the real event that followed, 11 Nov 2022 Tonga M7.3 event. For this, there were 2 groups (PacWave-PICT set up for PW22, and then SWP Tsunami set up by Laura months before and targeting more science). As they do not have the same people listed then there is a risk of uneven dissemination of info
- Going forward, if MS want to continue such comms, then need to agree on
 - Name to use. For example, consider if name should give an indication or what it is (such as, TWC_non-ops, meaning *do not use for operational purposes, or ?*)
 - Who should be on the group
 - Which comm method is best (or several) to support national SOPs.
 - Is a separate person in Operations required to use it successfully? Test if it is feasible (timeliness, staffing, info content)?
- For the Exercise, feedback
 - For Messages

- "Acknowledge/received" messages were difficult to follow for what they referred to, so more info needed)
- For the "PTWC" injects
 - should include in the subject line the number of the Message (so it will be easy to identify the latest information).
 - create a new subject line to send each new message not as "Re: [Tsunami-picts] PTWC TSUNAMI THREAT MESSAGE". This occurred for messages 2-4.
- For the Comms methods,
 - WhatsApp method seems to be more easy and versatile for exchange of information (includes texts, images and voice clips).
 - Email has a delay on delivering the information but eventually the participants received it. Not all the participants have access to/can install WhatsApp.
 - Info Sharing Comm Method SOPs need to be created. "social media" method provides relaxed and amicable atmosphere for the exchange of information but to be official, it needs to establish rules maintain organization and ensure easy and useful access (e.g., if there are too many msgs feeding the chat, it is easy to get lost and not read the most recent info).

WAY FORWARD – ITIC

- Countries and Observers were unanimous that Info Sharing was valuable
- Want to continue, BUT to operationalize, NEED to establish SOPs and protocols so it is efficient for a real event, e.g., PROTOCOLS, MESSAGE FORMATS (Source, Content, Staging, etc), INFORMATION AUTHORITY, CONTENT, staff requirements to add comm method(s) for sharing
- Countries highlighted the unique value of HF radio (housed in differing agencies within country and not tsunami-specific), as along with Satellite Phone (essential and critical, but expensive), it was the only comms that worked post-HTHH.

CLOSING – ITIC

- Thank you to everyone. Exercise was a success meeting objectives. Everyone came together. Thanks to Anthony (French Polynesia) for documentations and hosting WhatsApp. Apologize for the last minute efforts
- Reminders of Evals to fill out, 1 per country. Include feedback in written comments so it is compiled and included in PacWave22 Summary Report
- Last Heads-Up – to be available in next month or Jan 2023:
 - IOC Post-Event Assessment for the HTHH volcanic eruption and tsunami (IOC Circular Letter 2877). Summary Report nearly finished and will be published by IOC
 - Field Survey of Runup and Inundation in Tonga from the January 2022 eruption of the Hunga Volcano – Summary Report (Borrero et al., 2022). Will be posted, along with runup and inundation data, and visuals (photo, drone of impacts) on ITIC web page. http://itic.ioc-unesco.org/index.php?option=com_content&view=category&layout=blog&id=2709&Itemid=3327