ICG/PTWS/WG-PICT



Commission

Oceanographic

#### Co-Chairs:

Jonathan Tafiariki (Solomon Islands) Anthony Jamelot (French Polynesia)

### Regional Geohazard Meeting

26th February 2025, Apia, Samoa



- 15 min: Chairs Report going trought each TORs (+ Pacwave24-PICT)
- 10 min: Sharing experience from Vanuatu Mw 7,4 information sharing, Slack and more through WhatsApp. It shows how it is important to have a regional connection for collaboration and help.
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- 5 min : **AOB**

### **Close of meeting**



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#### **IOC ICG/PTWS STRUCTURE - WORKING GROUPS AND TASK TEAMS 2023-2025**

#### Inter-Governmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS)

Chair: Mr. Yuji Nishimae (Japan)

Vice-Chairs: Dr. Dakui Wang (China)

Dr. Wilfried Strauch (Nicaragua)

Mr. 'Ofa Fa'anunu (Tonga)

Steering Committee: Chair, Vice-Chairs, Working Group and Task Team Chairs, Vice-Chairs

Directors of PTWS Tsunami Service Providers (TSPs) and ITIC



Regional Working Group **Central American** Pacific Coast (WG-CA)

Regional Working Group **South East Pacific** (WG-SEP)

Regional Working Group **Pacific Island Countries** and Territories (WG-PICT) **Regional Working Group** South China Sea (WG-SCS)

C: Griselda Marroquin (SV) VC: Dr. Wilfried Strauch (NI) C: Matias Sifon (CL), VC: Michael Linthon (EC)

C: Esline Garaebiti (VU), VC: Mathew Moihoi (PG)

C: Dr. Dakui Wang (CN), VC: Suci Anugrah (ID)

**Working Group 1 Understanding** Tsunami Risk

Working Group 2 **Tsunami Detection, Warning** and Dissemination

Working Group 3 Disaster Risk Management and Preparedness

C or Co-C: Chris Moore (US)

C: Dr. Bill Fry (NZ), VC: Lara Bland (NZ), Dr. Vasily Titov (US)

C: Ashleigh Fromont (NZ), VC: Dr. Laura Kong (ITIC)

SC Task Team **PacWave Exercises** 

WG 2 Task Team Tsunami Service **Providers** 

WG2 Task Team Integrated PTWS Sensor Networks for Tsunami **Detection and** Characterisation

WG2 Task Team Tsunami Forecasting from Ocean Observations

WG2 Task Team Tsunami Generated by Volcano

WG3 Task Team Tsunami Ready

**WG-PICT** Task Team Seismic Data Sharing in the **South West** Pacific

**WG-PICT** Task Team Capacity Development

**WG-PICT** Task Team Information Sharing **Platforms** 

WG-SCS Task Team Capacity Development and Services

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Pacific

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WG 2 Task Team Tsunami Service **Providers** 

SC Task Team

**PacWave** 

**Exercises** 

WG2 Task Team Integrated PTWS Sensor Networks for Tsunami Detection and Characterisation

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**WG-PICT WG-PICT** Task Team Task Team Seismic Data Capacity Sharing in the Development **South West** 

**WG-PICT** Task Team Information Sharing **Platforms** 

WG-SCS Task Team Capacity Development and Services

# Task Team Information Sharing Platform Objectives



Following the PICT regional pacwave22 exercise objective 2, in order to continue and follow recommendations from WG-PICT meeting on 3<sup>rd</sup> February. 2023, an interim Task Team has been built in order to organize and think about direct informal exchange in a tsunami warning context between PICT members and especially the South-West Pacific Region.

During the 2022 PacWave Regional Exercise three alternative direct communication modes where tested:

- HF radio
- E-mail Listserv from ITIC
- Social network using a dedicated WhatsApp Group

The main objective of this task-team is to provide guidelines and recommendations for a direct informal exchange of tsunami information between NTWC and NDMO from PICT member in order to test it again for the next PacWAve 2024.

The Task team deadline could be after PacWave 2024.

Interim Co-Chairs: Anthony Jamelot (French Polynesia) and Jonathan Tafiariki (Solomon Islands) -February 2023

#### Composition:

The Group to be comprised of representatives from Pacific Island Countries and Territories (PICTs) and ITIC as members, Council of Regional Organizations in the Pacific (CROP) Agencies and WMO Regional Association V (RAV) as observers with Chair and Vice Chair to be elected by the members of the Working Group and endorsed by the ICG/PTWS

# Unesco Intergovernmental Oceanographic Commission Commission

## Terms of Reference (2023 version)

- 1.Propose a WG-PICT regional PacWave24 objective;
- 2.Based on Pacwave22 report, re-evaluate early /anticipatory information to be shared between NTWC and NDMO and which platform would be more adapted for each kind of information.
- 3. Whats App Guidelines;
- Maintain the mobile contact list up to date in order to keep the PacWave22 group alive;
- Obtain official mobile numbers of NTWC and NDMO (handle by IOC/UNESCO Secretariat)
- guideline for messages sent on WhatsApp
- 4.HF- Radio Guidelines:
- Fecth feedbacks from monthly test and recommend preliminary guidelines.
- Membership of the task team is open to any technical communication expert on this platform
- 5.Email Listerv Guidelines:
- guideline for messages shared by email (no acknowledgement, etc)
- Update and add new e-mail into the Pacwave22 listserv handled by ITIC
- 6. Identify and list new and relevant platform for Information Sharing
  - Other social media (Signal, ...)
  - Mobile App Broadcast system
  - Dedicated (private) broadcasting information web-page.

# Commission Commission Oceanographic Commission Oceanographic Commission Oceanographic Oceanographic

### Report synthesis

- TT-ISP was officially validated last september 2023 ICG/PTWS XXIX Tonga, (Pacwave-22 PICT)
- Intersessional action & tasks
  - TT-ISP = 5 Online meeting in 2024
  - Prepare SLACK guidelines
  - Prepare & conduct the PICT-Pacwave24 regional exercise



# Exercise debrief

Pacwave24-PICT Webinar - 13 November 23:00 UTC

WG-PICT + TT Information Sharing Platform. - A.Jamelot - France - French-Polynesia

## PICT Pacwave 24

# Commission Commission Oceanographic Commission Oceanographic Commission Oceanographic Oceanographic

## Objectives (A 2 hours real-time international exercise)

- Test communication tools to enhanced Information sharing across the region between all tsunami stakeholders
- This time only tsunami generated by earthquake has been chosen

## Why a complex earthquake scenario & which challenges?

- A multiple tsunami waves generated by earthquake that occurred at in a short time (< 30minutes) is a possibility (Recall of 2021 events)</li>
- Having two strong earthquakes in a short time with a similar energy can lead to wrong earthquake analysis and so a lack of early information to assess the tsunami risk



# Commission Commis

## Objectives (A 2 hours real-time international exercise)

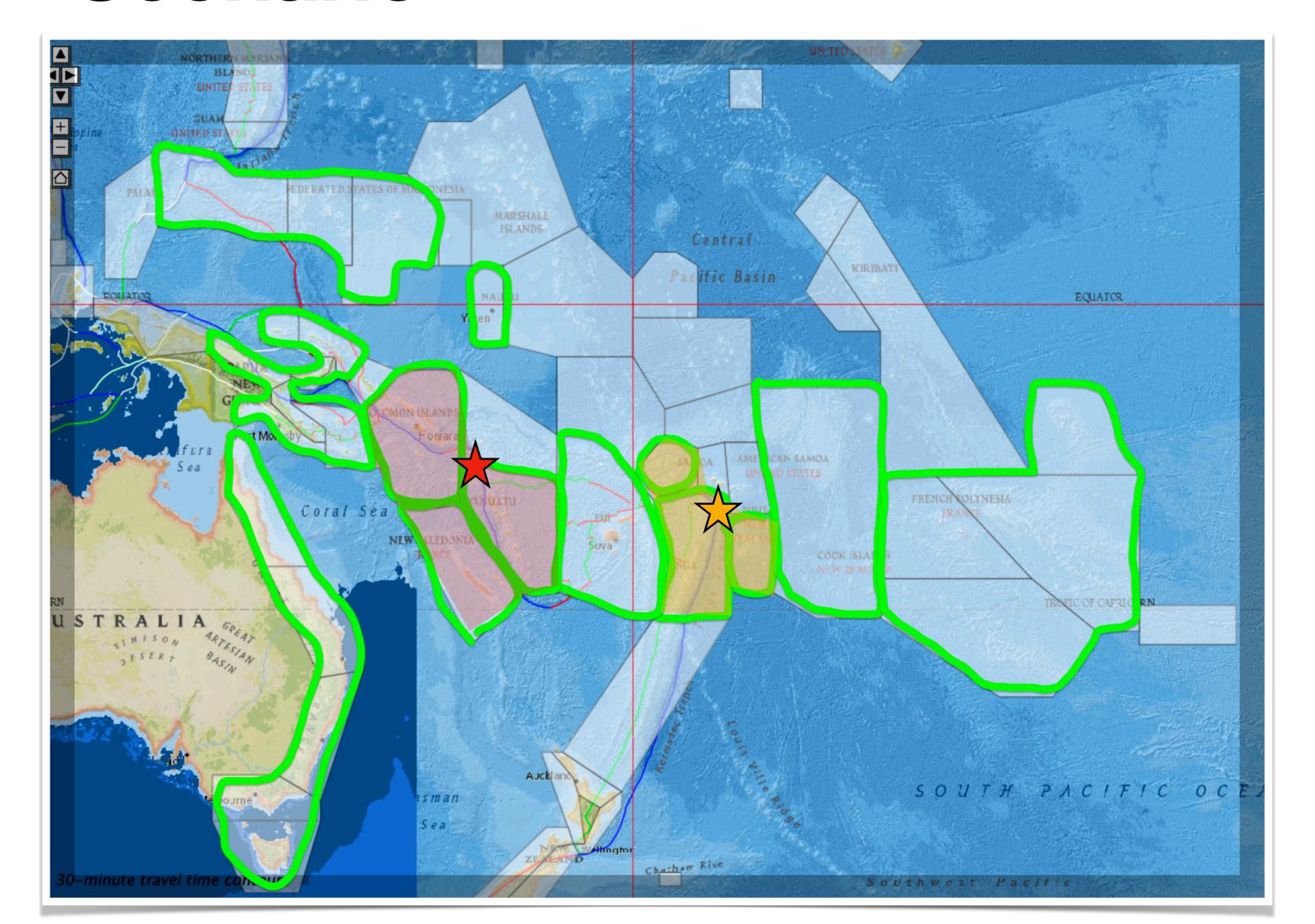
- Test communication tools to enhanced Information sharing across the region between all tsunami stakeholders
- This time only tsunami generated by earthquake has been chosen

## Why a complex earthquake scenario & which challenges?

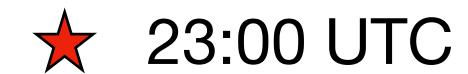
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- Having two strong earthquakes in a short time with a similar energy can lead to wrong earthquake analysis and so a lack of early information to assess the tsunami risk

In this case a regional cooperation and sharing tsunami impact becomes crucial

## Scenario







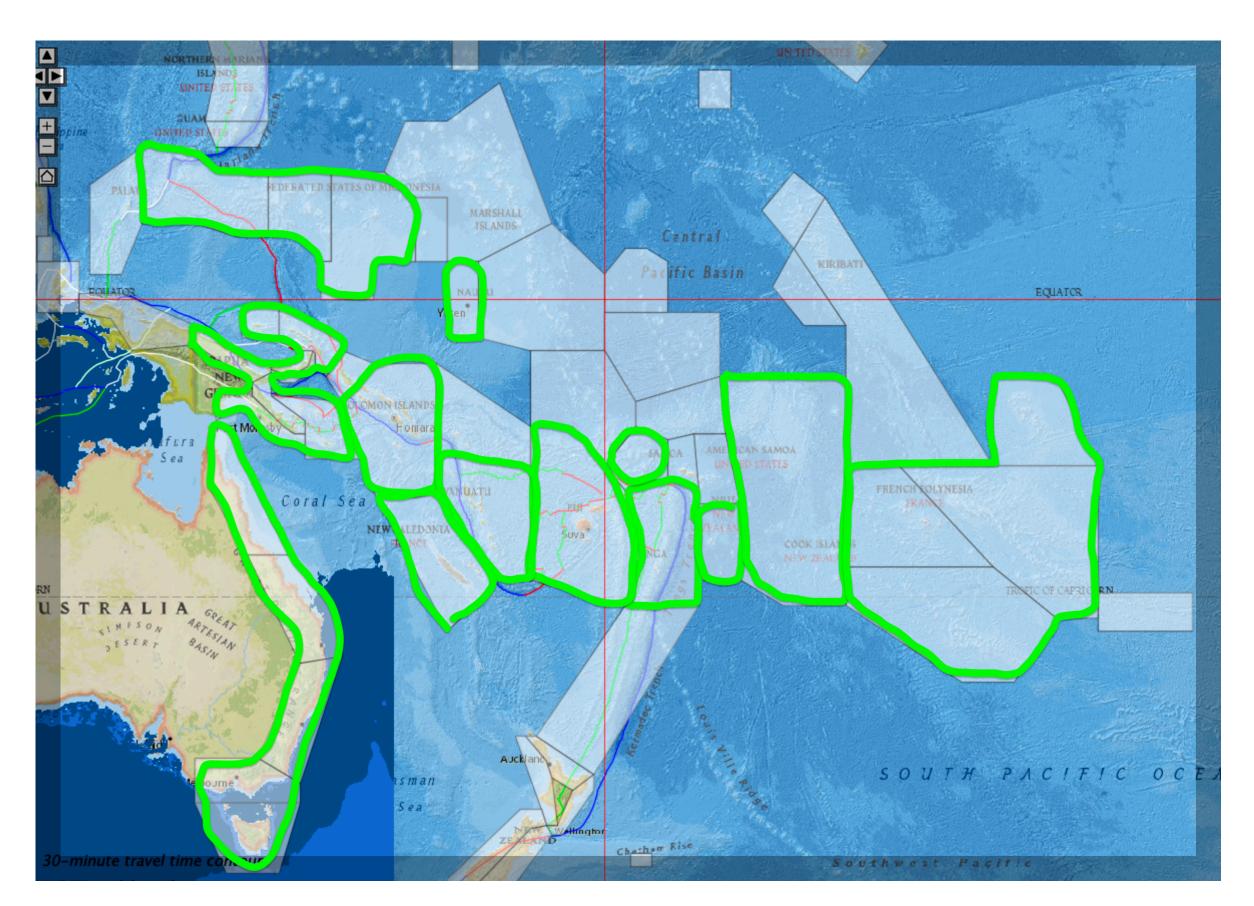
★ 23:15 UTC

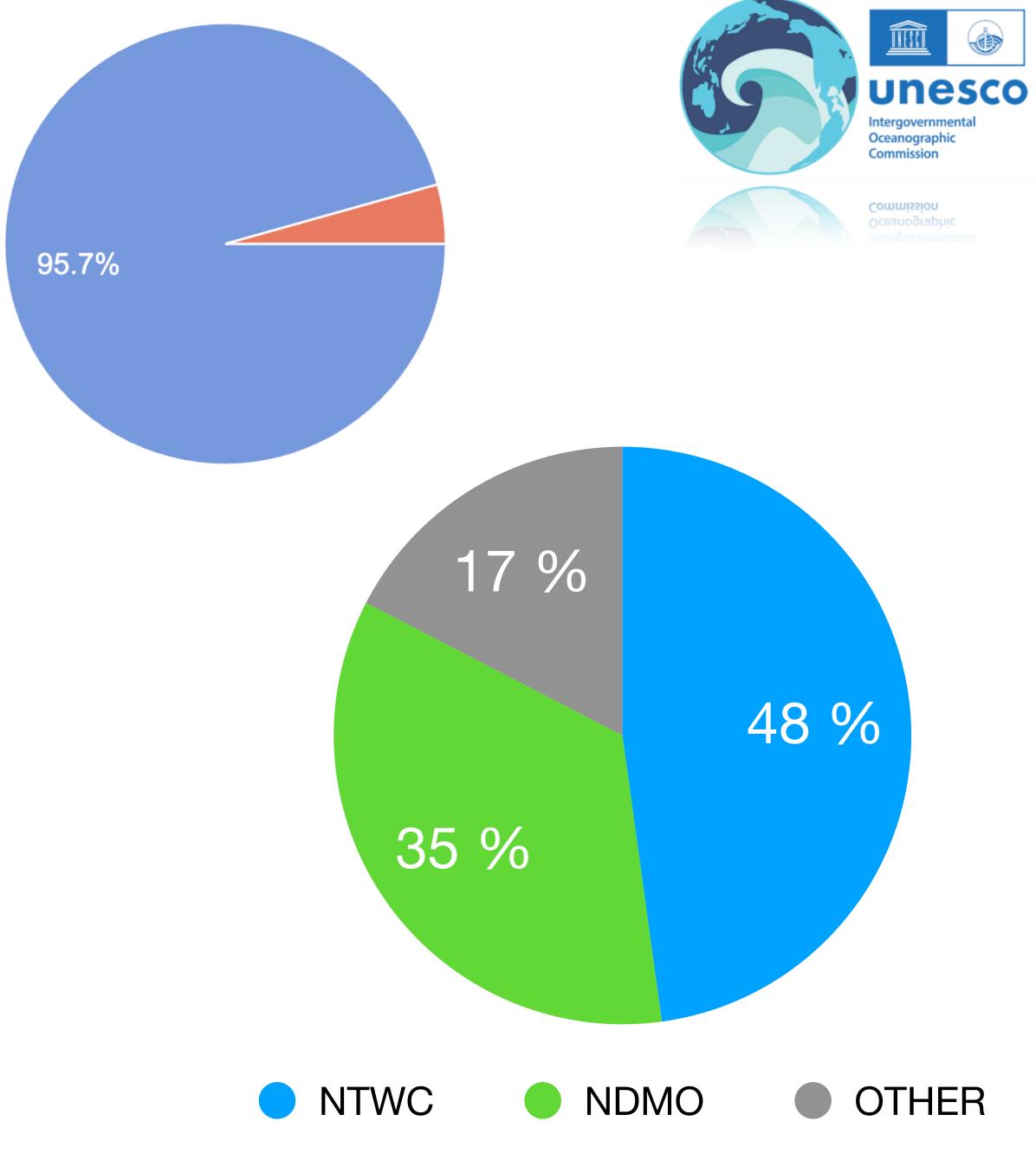
 PTWC standard bulletin will be simulated in an exercise mode and will be send to the official recipient list of each participants during the 2 hours of the exercise

## Introduction

22 National agencies registered

-> 13 PICT members participants

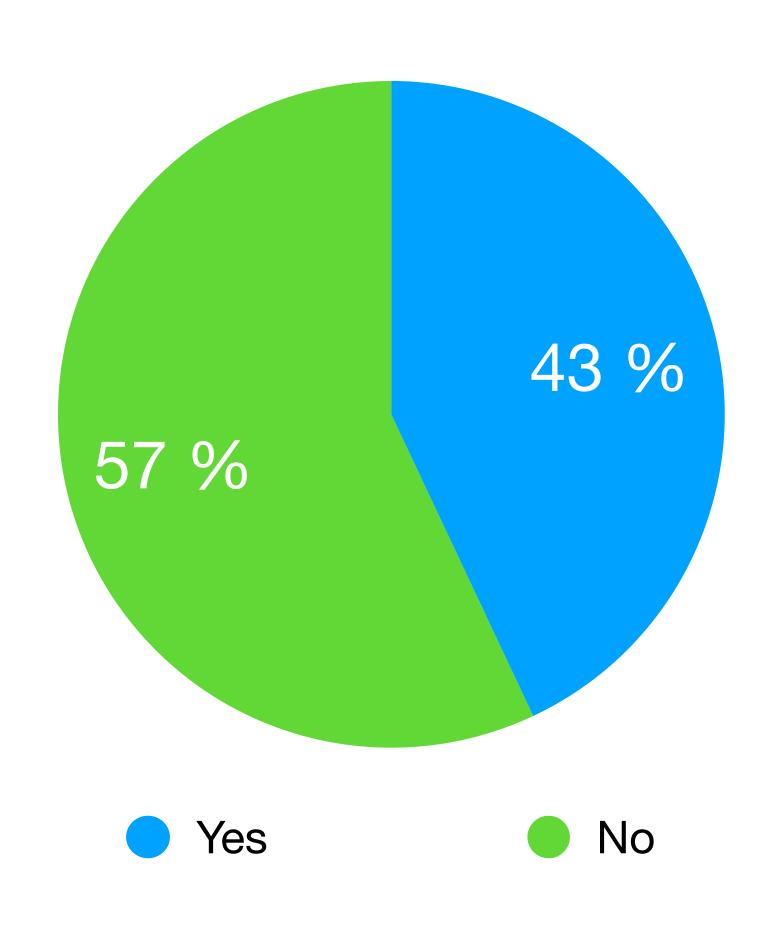








### Guidelines already available from PacWave22, reported on the SLACK platform

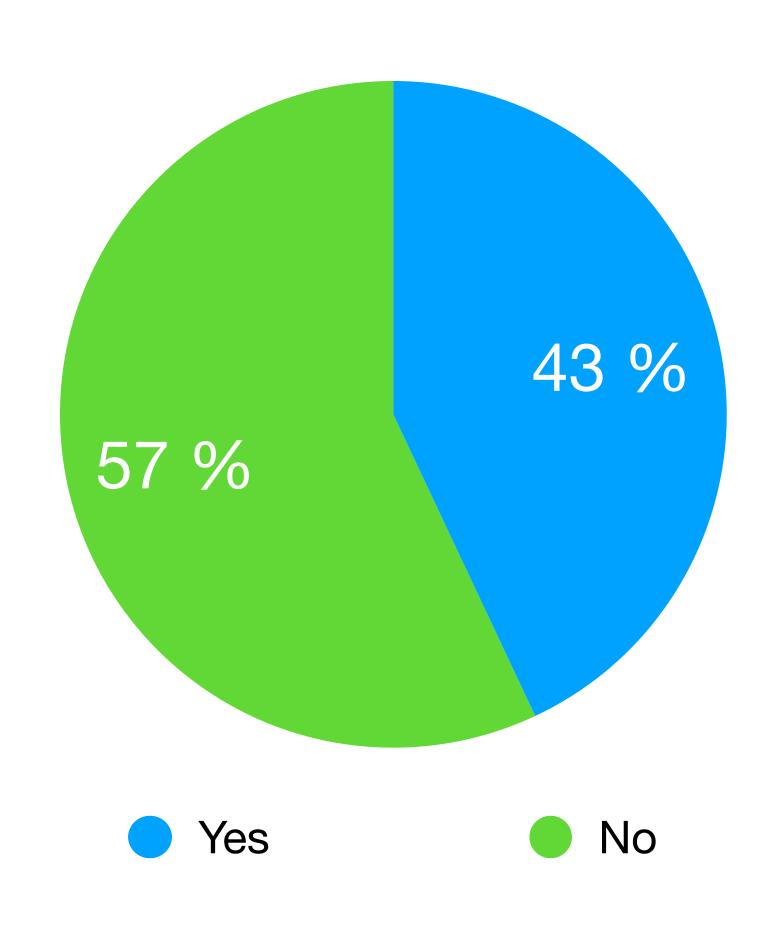


- Suggested HF Radio test from the registration are :
  - Nauru <-> Solomon
  - Solomon <-> P.N.G
  - P.N.G <-> Fiji
  - Fiji <-> Tonga
  - Tonga <-> Niue





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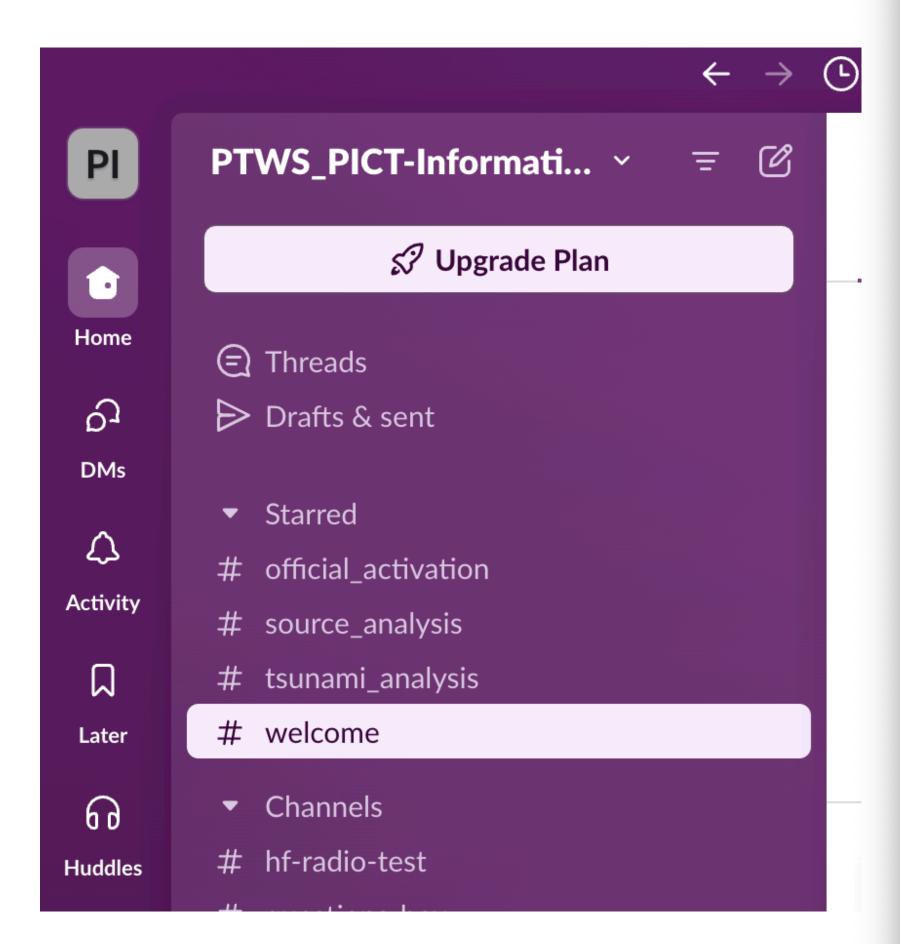


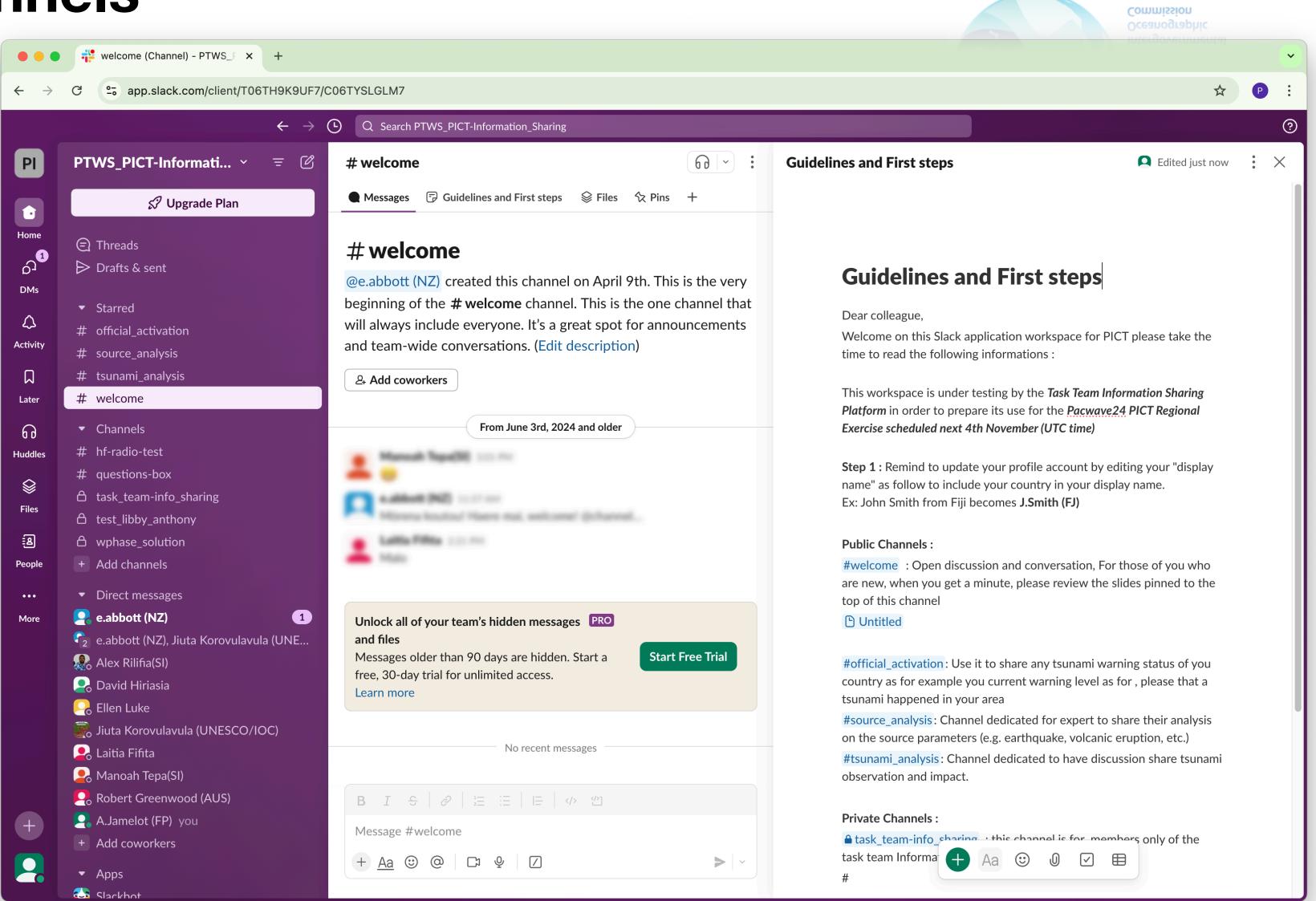
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# SLACK (48 members NDMO&NTWC)

# Unesco Intergovernmental Oceanographic Commission

### Guidelines for each channels









#### **Guidelines and First steps**

Dear colleague,

Welcome on this Slack application workspace for PICT please take the time to read the following informations:

This workspace is under testing by the *Task Team Information Sharing Platform* in order to prepare its use for the Pacwave 24 PICT Regional Exercise scheduled next 4th November (UTC time) Last updated documentation is available here.

Step 1: Remind to update your profile account by editing your "display name" as follow to include your country in your display name.

Ex: John Smith from Fiji becomes J.Smith (FJ)

#### **Public Channels:**

#welcome : Open discussion and conversation, For those of you who are new, when you get a minute, please review the slides pinned to the top of this channel

#official\_activation: Use it to share any tsunami warning status of you country as for example you current warning level as for, please that a tsunami happened in your area

#source\_analysis: Channel dedicated for expert to share their analysis on the source parameters (e.g. earthquake, volcanic eruption, etc.)

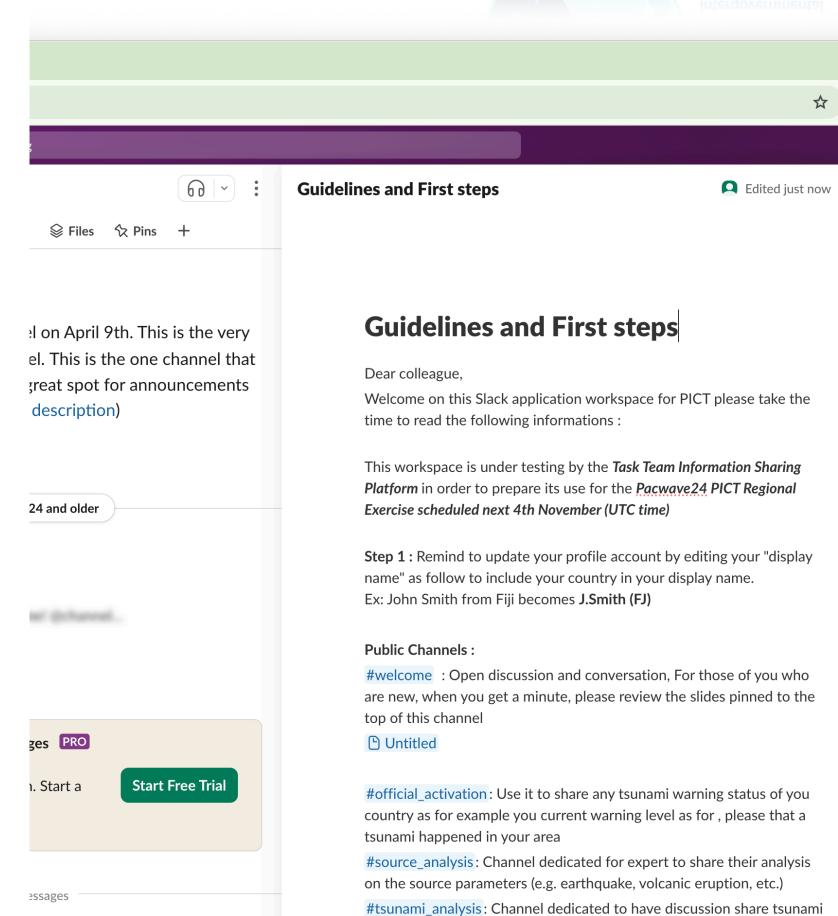
#tsunami\_analysis: Channel dedicated to have discussion share tsunami observation and impact.

#hf-radio-test: Channel dedicated to share information to coordinate HF radio communication test between participants during the exercise time (Frequency and start of testing). Do not hesitate direct messaging between each pother for more readiness.

#questions-box: Channel dedicated to any question out of the scope of the previous one, like question on SLACK or question about the exercise itself.

#photos: Channel dedicated to share any pictures or photography (Team group photo, Exercise, ...)

#### **Private Channels:**



observation and impact.

a task team-info sharing this channel is for members only of the

**Private Channels** 

> \

# SLACK (48 members NDMO&NTWC)



### Guidelines for each channels





## PICT Pacwave 24 feedbacks

# Commission Commission Commission Intergoverumental Oceanographic Commission Intergoverumental Oceanographic Commission Intergoverumental Oceanographic Interport Interport Interport Intergoverumental Oceanographic Interport Interpo

#### **SLACK feedbacks**

- Need to share more about tsunami observations and impact
- SLACK Desktop version over web browser is very intuitive
- Good channel topics
- We could add a new channel: #tsunami-report to share impacts of the tsunami (photos, runup heights)
- Slack offer possibility to generate teams, during the exercise Libby generated country teams. This make easier to adress a question to specific country
- When sharing earthquake parameters, we need also to share the depth
- Is the focal mechanism usefull to share as well here?
- National activity will be always the priority, this is a only non official channel so people do not have to rely on it.
- Some participants have got some IT security policies issues to access to SLACK or reciveing external email, and some of them having firefox version comptability issues as well.
- Slack Mobile Application worked fine during this exercise

#### HF Radio feedbacks

- -Organizing a HF radio test monthly?
- -Define a caught signal for the regional and Tsunami/Earthquake warning?
- -HF frequency, seems to be 1205 kHz

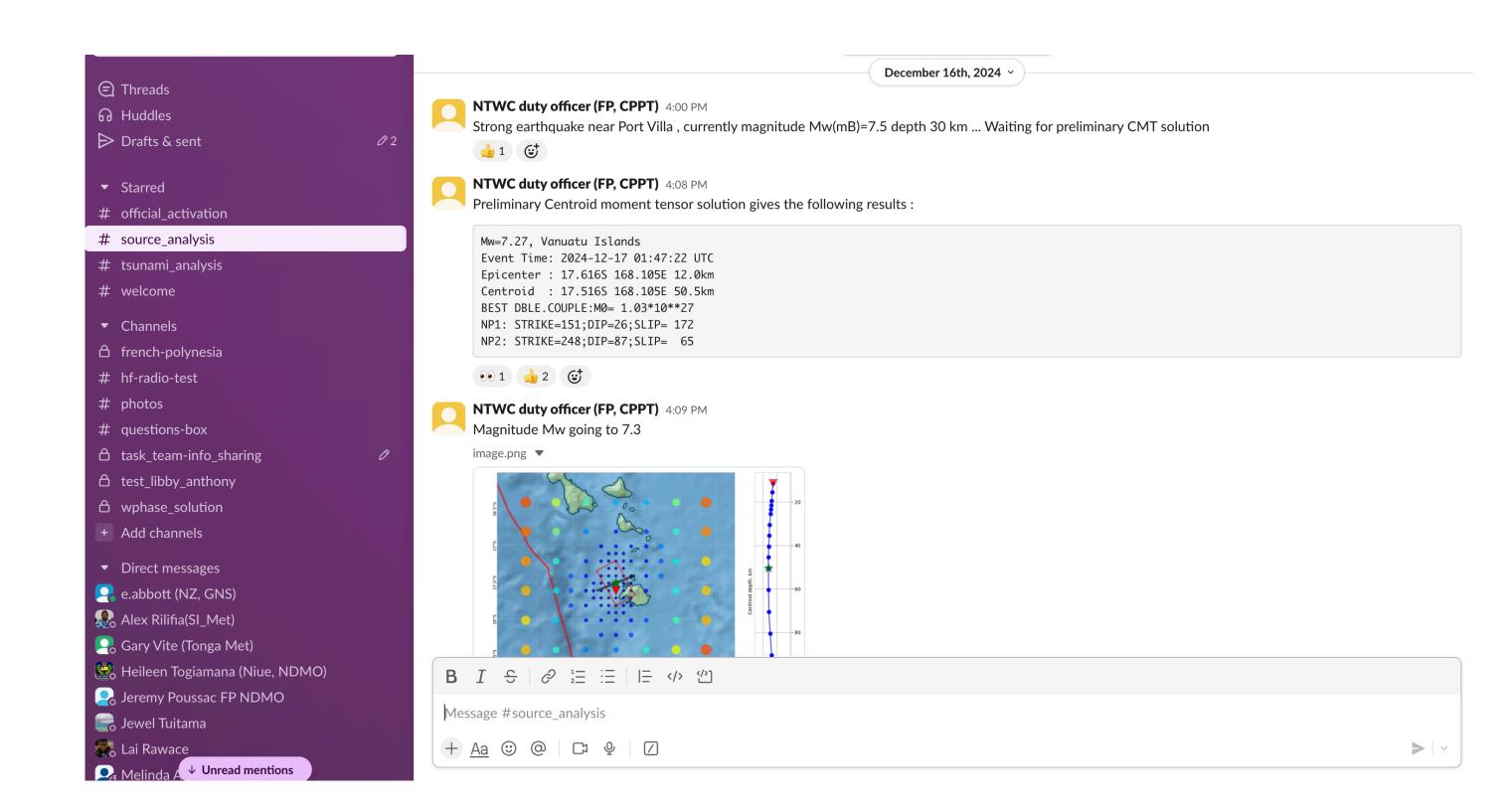


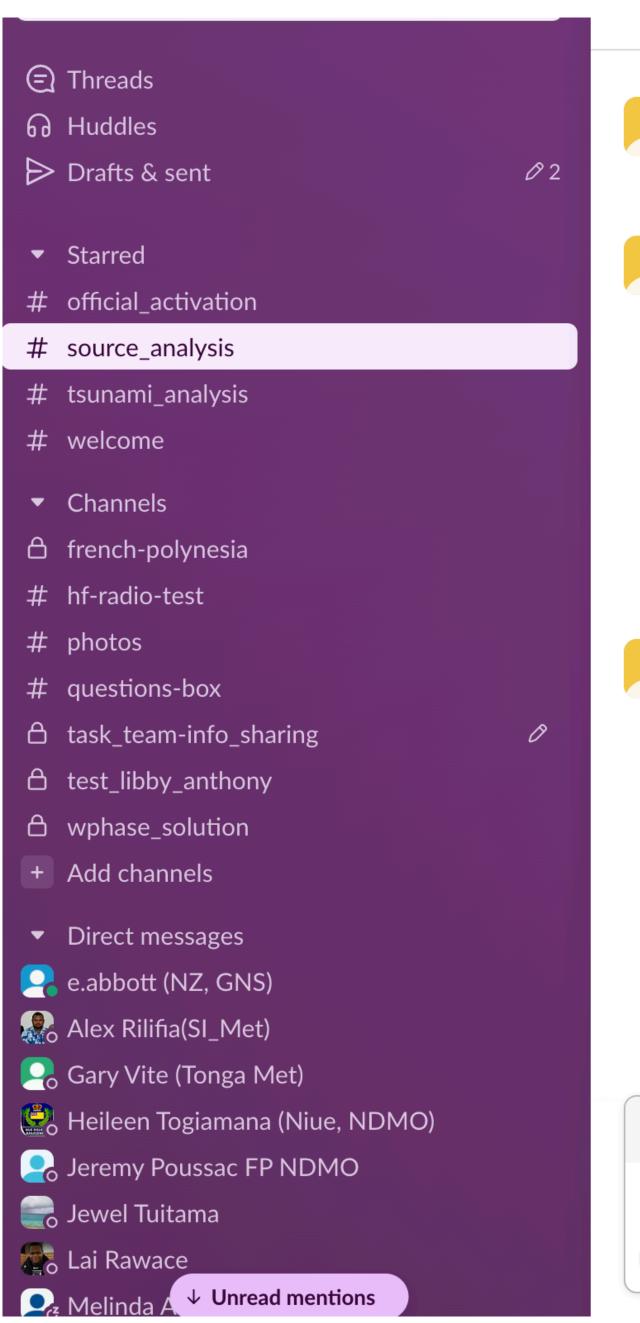
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# Vanuatu feedback on the information sharing during the 17th December 2024 Mw 7.3



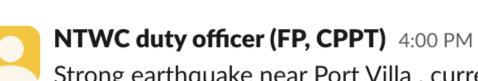
- 1.SLACK was used first
- 2. Then, through ORSNET whatsapp group
- 3. Which information was crucial?





December 16th, 2024 ×





Strong earthquake near Port Villa, currently magnitude Mw(mB)=7.5 depth 30 km ... Waiting for preliminary CMT solution





Preliminary Centroid moment tensor solution gives the following results:

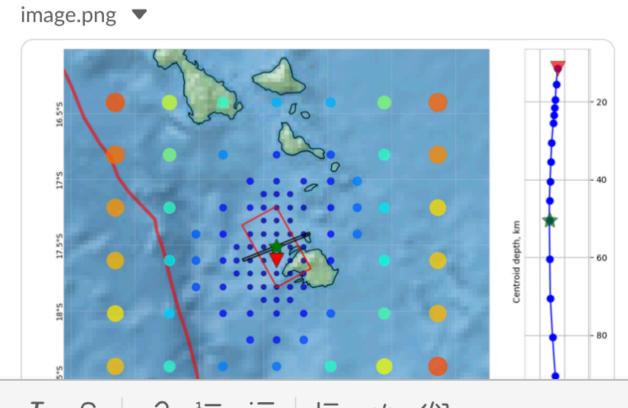


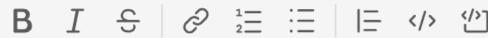
Mw=7.27, Vanuatu Islands
Event Time: 2024-12-17 01:47:22 UTC
Epicenter: 17.616S 168.105E 12.0km
Centroid: 17.516S 168.105E 50.5km
BEST DBLE.COUPLE:M0= 1.03\*10\*\*27
NP1: STRIKE=151;DIP=26;SLIP= 172
NP2: STRIKE=248;DIP=87;SLIP= 65





Magnitude Mw going to 7.3

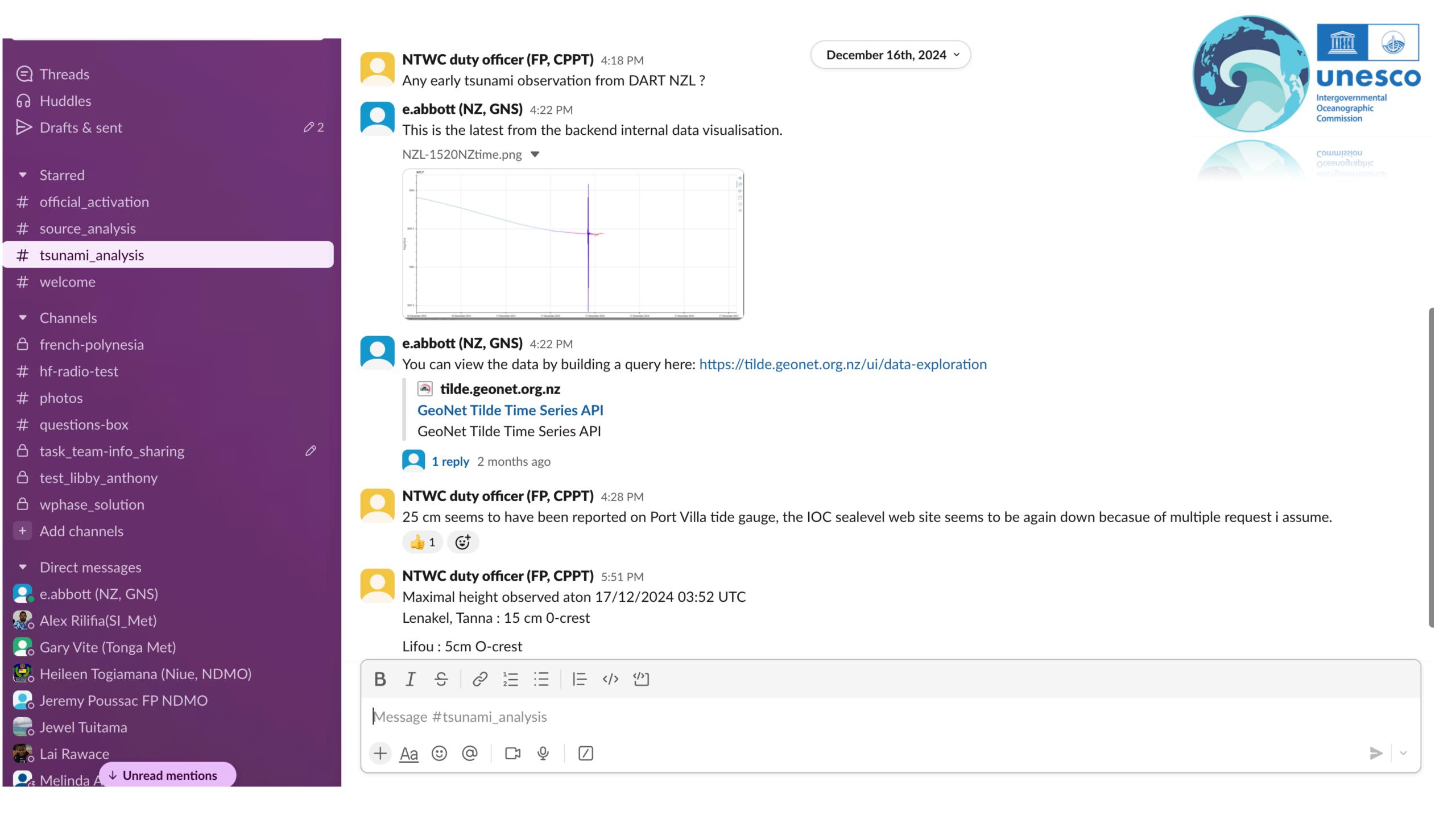




Message #source\_analysis









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# Vanuatu feedback on the information sharing during the 17th December 2024 Mw 7.3



- 1.SLACK was used first
- 2. Then, through ORSNET whatsapp group
- 3. Which information was crucial?

# What kind of information could be shared automatically between regional members?



- 15 min: Chairs Report going trought each TORs (+ Pacwave24-PICT)
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### Close of meeting

## Task Team Information Sharing Platform Terms of Reference



(...)

### 6.Identify and list new and relevant platform for Information Sharing

- Other social media (Signal, ...)?
- Mobile App Broadcast system?
- Dedicated (private) broadcasting information web-page. ?
- Satellite phone contact list? Who's has it?

- ...

#### Pacwave24 Misc:

- EMWIN reciever used in Fiji and Tonga to get PTWC bulletin warning from GOES directly, share this setup with others members.
- During the exercise we have tested a double tsunami event seperated by
- What about sat phones? Which members have one, build a regional contacts list with those numbers (saved by IOC/UNESCO) then share this information between members (if agree).
- -Other technologies ?



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### Close of meeting

## Task Team ISP Recommendations



- CONTINUE to conduct and support the next regional PICT PacWave exercise.
- RECOMMEND in person table top exercise between WG-PICT members at their convenience with the support of TT ISP.
- AGREE and SUPPORT a monthly regional HF radio test communication between PICT with the collaboration of the WFP/ECT
- RECOMMEND members to maintain VHF/HF radio communication redundancy to support national emergency
- **EXPLORE** for other communication technology as satellite link to support national emergency and recommend PICT members to acquire such equipment.
- ENHANCED information sharing guidelines through all tested communication lines;
- ENHANCED and PROMOTE the regional information sharing platform (currently SLACK)
- **ASK** the TSP PTWC to add an event identifier in the email subject of PTWC bulletins in case of multiple tsunami event in a short time.



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(i) Reconduct the TT? For 2025 - 2027



- (i) Reconduct the TT ? 2025 2027
- (ii) Any candidature for officials of the TT

#### **Interim Co-Chairs:**

Jonathan Tafiariki (Solomon Islands) Anthony Jamelot (French Polynesia)





- (i) Reconduct the TT ? 2025 2027
- (ii) Any candidature for officials of the TT
- (iii) Update ToR



# Task Team Information Sharing Platform Terms of Reference / ToR (Updated)



- 1.Propose, organize and conduct a WG-PICT regional PacWave26;
- 2.Re-evaluate early /anticipatory information to be shared between NTWC and NDMO and which platform would be more adapted for each kind of information.
- 3. Moble / desktop app Guidelines (WhatsApp, SLACK, ...);
- Maintain the mobile contact list up to date in order to keep the PacWave22 group alive;
- Obtain official mobile numbers of NTWC and NDMO (handle by IOC/UNESCO Secretariat)
- guideline for messages sent on WhatsApp
- 4.HF- Radio Guidelines:
- Support regional monthly test and recommend preliminary guidelines in collaboration with WFP/ETC.
- Membership of the task team is open to any technical communication expert on this platform
- 5.Email Listerv Guidelines:
- guideline for messages shared by email (no acknowledgement, etc)
- Update listserv handled by ITIC
- 6. Identify and list new and relevant platform for Information Sharing
  - Mobile App Broadcast system;
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  - Build a Satellite phone contact list among PICT Members

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Oceanographic Commission

## Thank You

