

# Seismic Data Sharing in the South West Pacific, report and progress

**Esline Garaebiti, Vanuatu Meteorology and Geo-Hazards Department**  
**Pierre Lebellegarde, IRD, New Caledonia**



## 4<sup>th</sup> South West Pacific Seismic data sharing Task Team meeting, Suva, Fiji, 3-4 November 2015

- 12 participants from 6 island countries (Fiji, Tonga, PNG, New Caledonia, Australia, Vanuatu).
- Also attended by representatives from IOC, SPC, PTWC and JICA
- Co-funded by ORSNET project, IOC and SPC
- Held Back to back with the ORSNET annual meeting and training
- The task team meeting to
  - To discussing recent and planned developments to seismic network in the SW Pacific
  - To discuss how to improve data sharing efforts in the region.
- The role of the Task team is
  - To advocate seismic data sharing in the region,
  - To provide advice on data sharing protocols, techniques and technologies
  - To work with Pacific Countries and donors to ensure a common data sharing policy.



# 4th Seismic data sharing TT meeting – Decisions and recommendations

## **1- Continue the Task Team for at least one more ICG/PTWS Intercessional Period with the following recommended Terms of Reference:**

- To advocate data sharing in the region for tsunami early warning ;
- To advise South West Pacific countries on data sharing protocols, techniques and technologies;
- To work with South West Pacific Countries and partners to ensure a common data sharing policy using the standards developed by the FDSN for data exchange
- Ensure South West Pacific Countries with existing or planned broadband seismograph stations to register their network with the International Federation of Digital Seismograph Networks (FDSN),



# 4th Seismic data sharing TT meeting – Decisions and recommendations (cont.)

**2- The meeting noted the seismic network upgrading plans for Vanuatu and Solomon Islands and encouraged other countries to also make similar effort with donors and partners for continued improvement of seismic detection and tsunami warning.**

**4- The meeting requested ORSNET Regional Data Centre and IRIS to assist with metadata training for South West Pacific countries.**

**5- The meeting noted challenges still faced by several SW Pacific countries with communication issues especially regarding internet bandwidth, high cost and maintenance and recommended that a coordinated regional approach be undertaken to potential donors to address these needs.**

**6- The meeting agreed that the current two Co-chairs, continue in their roles for the next Intercessional Period.**

**7- The meeting was pleased to be informed on progress with the Oceania Regional Seismic Network (ORSNET)**



# SWP seismic data sharing progress through ORSNET

- **Project funded by Pacific fund through the French Government since 2013, managed by Vanuatu Meteorology and Geo-Hazards Department for the ORSNET countries**
- **ORSNET server installed and supported by ICT technical team in IRD, New Caledonia in 2014 to share and archive data for ORSNET countries, Fully functional since installation, 99% of running time**
- **Vanuatu and New Caledonia Network connected in 2012**
- **Solomon Islands Seismological station and Western Samoa Seismological Network connected in 2013**
- **Samoa network is connected in 2014**
- **Fiji and Tonga Seismological Network connected in 2015**
- **Mutual support between Solomon Islands and Vanuatu in the extension of the Solomon Island seismic network since 2013**



- **PNG Network to be connected yet in 2016**
- **June 29- 30<sup>th</sup> : provision of the link to the ORSNET server to PTWC**
- **In total 38 seismic stations data are shared among ORSNET countries, 28 more stations to come**



## 4th Seismic data sharing TT meeting considerations

- **ORSNET Member States presently consist of Fiji, New Caledonia, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu. Membership could be extended to other countries operating a national seismic network, such as French Polynesia, in due course.**
- **The main focus of ORSNET is the provision of real-time seismic data to ORSNET Member States and the PTWC for tsunami warning purposes.**
- **The meeting requested ORSNET Project to:**
  - **ensure that gap analysis for effective seismic detection and monitoring at local level is carried out for each country.**
  - **To develop a seismic inventory for all ORSNET Member Countries which should also include station meta data.**

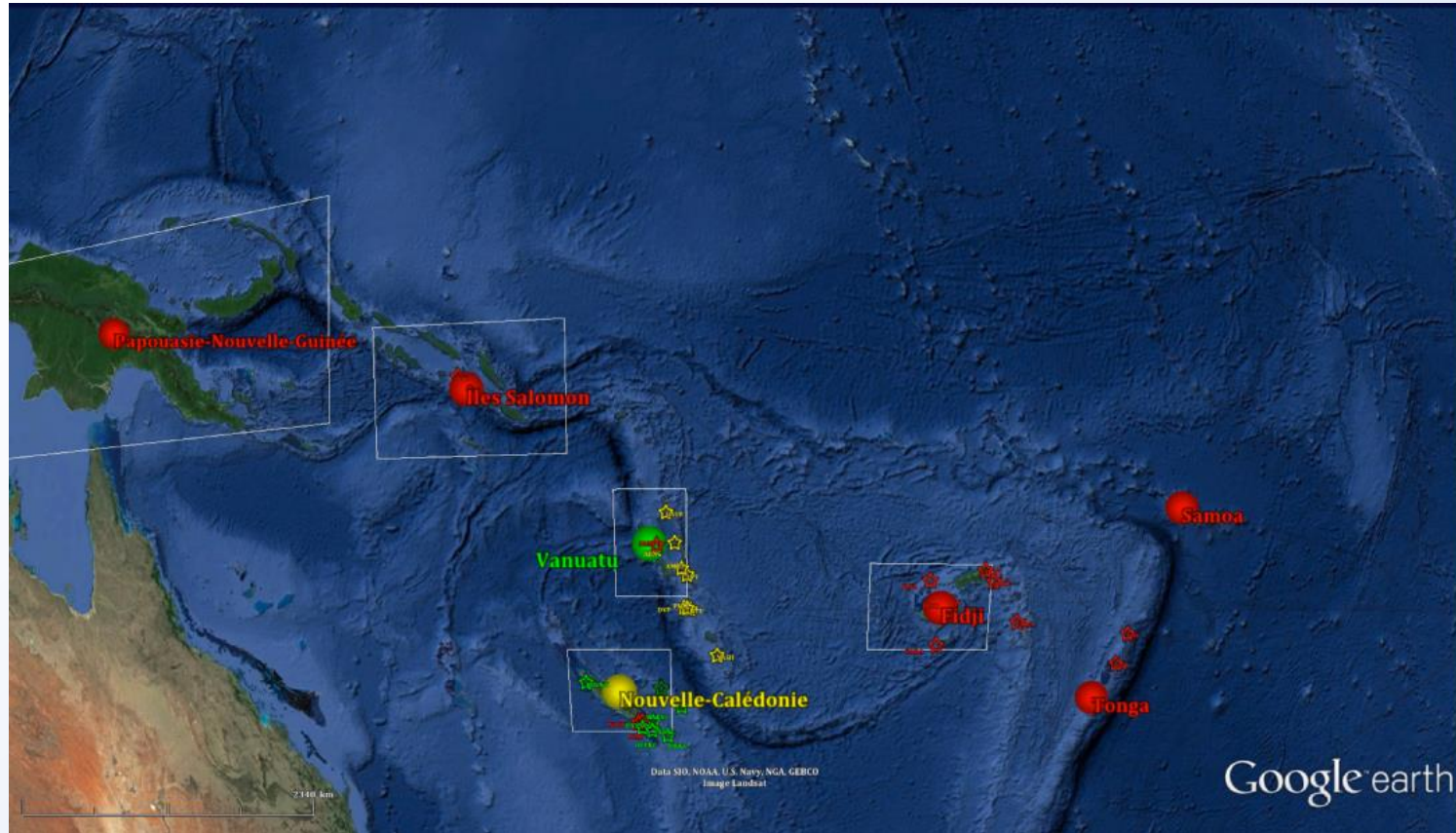


- *The ORSNET Data Policy is still under development. Meanwhile, the Members have agreed to the following:*
  - **ORSNET Regional Data Centre to provide real-time seismic data to ORSNET Member States and the PTWC for tsunami warning purposes**
  - **The ORSNET Regional Data Centre will redistribute any ORSNET Member State's real-time seismic data feed to IRIS, only if agreed by the concerned ORSNET Member State.**
  - **ORSNET Regional Data Centre to archive all seismic data received from every Member State.**
  - **ORSNET Member States and PTWC are prohibited to distribute seismic data of any other ORSNET Member State.**
- *While there were efforts to seek continued funding from the French Pacific Funds, there was a need at the same time for the ORSNET programme to be regionally aligned for future sustainability.*





# The Oceania Regional Seismic NETwork - ORSNET



- Promote mutual exchange of expertise, human resources and data
- support National Warning Centers to:
  - Increase local Earthquake Detection and Analysis Capacity
  - Provide Technical Support for Seismic National Monitoring Network
  - Improve Seismic Data backup and archive



# SWP Seismic data sharing perspective

- **Integrate the remaining countries as agreed by ORSNET members**
- Strengthen Regional and international Seismological Observatories Partnerships for:
  - Increased training efforts, (basics in seismology, TWS process, Network Maintenance, Standardization Processes, Focal Mechanism, Intensity and Shake maps, warning dissemination systems, risk mapping and planning etc..)
  - Continue mutual exchange to support each other technically and financially .e.g. Vanuatu-Solomon Islands, Vanuatu-Tonga, Fiji-Tonga etc..
- **Advocate for National and regional funding support mechanisms**
- Increase Technical Capacities of National Seismological Observatories for complete Earthquake and Tsunami EWS from detection to the end to end warning dissemination system (e.g. CAP)





# Thank you.

