



## REPUBLIC OF VANUATU/RÉPUBLIQUE DE VANUATU

### VANUATU METEOROLOGY AND GEO-HAZARDS DEPARTMENT DÉPARTEMENT DE LA MÉTÉORLOGIE ET DES GÉORISQUES DE VANUATU



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### MEDIA RELEASE No. 20210201

**11:00am, Wednesday, 17 February, 2021**

### **EARTHQUAKE EVENT OF 11 FEBRUARY NEAR MATHEW AND HUNTER ISLANDS AND CONTINUOUS EARTHQUAKE ACTIVITIES WEST OF EFATE ISLAND**

Port Vila is the capital city of Vanuatu, which is situated in one of the most populated islands of Efate. The city stretches along the coast of the southern to the south-western part of the island facing the ocean towards the New Hebrides (Vanuatu) trench. This statement, highlights the status of the seismic activity since the beginning of the month of February.

Vanuatu Archipelago is located along the subduction trench where the Indo-Australian plate Subducts eastward beneath the Pacific Plate. The island arc along with its chain of volcanic islands lies along the Pacific Rim namely the Pacific Ring of Fire. Along the trench, the seismic activity is always high and it is one of the most active seismic zones in the world.

Earthquake generation also depends on the type of plate region and the rate at which the plates move either towards or apart from each other. Vanuatu lies along the ring of fire where most earthquakes and volcanic activities occur and this means that; it will always experience these natural phenomena.

Since the beginning of this year, seismicity throughout the country is normal. At the beginning of this month, there were two seismic swarms recorded in the country. One of the swarm events happened further south, South of Mathew and Hunter after a major event that triggered a tsunami which travelled to the northern islands. However, the shaking of that earthquake was not felt by the locals and the tsunami did not cause any damage or casualties to any lives. The tsunami wave was confirmed to have reached the northern parts of the country through our Tide Gauge Stations installed at Lenakel wharf in Tanna, main Port Vila wharf on Efate, Litzlitz wharf on Malekula and Luganville wharf on Santo. Refer to figure 5 below for tide gauge readings. This event is considered to be a Local event as it had occurred in the Vanuatu Region enclosed by the following coordinates:

Longitude: 163°E and 175°E

Latitude: -10°S and -24°S

The other earthquake swarm currently happening and is still continuing is strictly in the Vanuatu region enclosed by the following coordinates:

Longitude: 165°E and 171°E

Latitude: -12°S and -21°S

This swarm of earthquakes does not trigger any major earthquake or tsunami event yet however, these earthquakes of magnitude 5 and above, but less than 6.0 can be felt by many and can sometimes be destructive to humans, infrastructures and the environment depending on their magnitudes and depths. Earthquake events of magnitude 6.0 and above with shallow depths are likely to produce possible tsunamis in our region. Since Sunday 14<sup>th</sup> of February, VMGD had recorded 465 earthquake events of magnitude ranging from 2.0 to 5.8 on our national Seismic Network (VNSN).

Further to that, the likelihood of having a major earthquake event can either trigger a tsunami or not in relation to this seismic swarm cannot be confirmed as these geological hazards cannot be predicted. So, the ongoing seismic activity clustering to the West of Efate Island, will continue to be felt by everyone in the country, particularly SHEFA Province as an alert and watch for any major earthquake event that could trigger a possible tsunami.

Moreover, recalling back to the seismic history around the same area off the coast of West of Efate, there were some past events that caused possible tsunamis generated from similar earthquakes of magnitude above 7 with shallow depths. On the second of January 2002 at 4:22 am local time, an earthquake of magnitude 7.2 with the depth of 21 Kilometres triggered a tsunami that arrived in Port Vila within 15 minutes after the shock. An aftershock with a magnitude of 6.4 with shallow depth also produced a tsunami with a much smaller amplitude compared to the main shock. There were also reports of landslides and damages around Port Vila. On August 10<sup>th</sup> 2010, a magnitude 7.3 struck around the same area with a depth of 25 Kilometres had also triggered a tsunami. Aftershocks did not produce any tsunami, but caused damage in Port Vila, the Outer Islands of Efate and the Shepherds group.

The Vanuatu Meteorology and Geo-Hazards Department (VMGD) under the Ministry of Climate Change and Adaptation (MoCCA) is kindly urging everyone especially people of SHEFA Province and Port Vila to stay Alert at all times and on Watch. Further to this, it has to be understood that the shake of the earthquake will have later impacts as it has weakened soil structures, buildings, tree branches, rocks from hill sides or slopes and mountain tops etc. Now that the Climate section under the department of VMGD issues a La Nina alert, there might be possibilities of landslides, mud flows and fallen rocks from hill sides as there will be more rain. Advice to the public about building structures, know what building you are in, Exit routes, Location of your house/building, Know your safe routes to safe zones if you work or live around coastal areas. For all these said information are for safety purposes to saving lives. Safe for everyone is Paramount so, we encourage everyone that Safety First or Prevention is better than Cure.

## “Be Disaster Ready, Disaster Resilience for better Vanuatu”

About VMGD:

For more information;

Contact Geo-Hazards on this email; [geohazards@meteo.gov.vu](mailto:geohazards@meteo.gov.vu) or called 24686 /33630

Director on this email; [mromone@meteo.gov.vu](mailto:mromone@meteo.gov.vu)

Alternatively;

1. Visit the VMGD Website: [www.vmgd.gov.vu](http://www.vmgd.gov.vu)

2. Visit the VMGD Face Book page: Vanuatu Meteorology and Geo-Hazards Department

### Photos and data, etc.:

1. *Events happening in the area below is the region considered to be “Strictly Vanuatu Events”.*

Longitude: 165°E and 171°E

Latitude: -12°S and -21°S

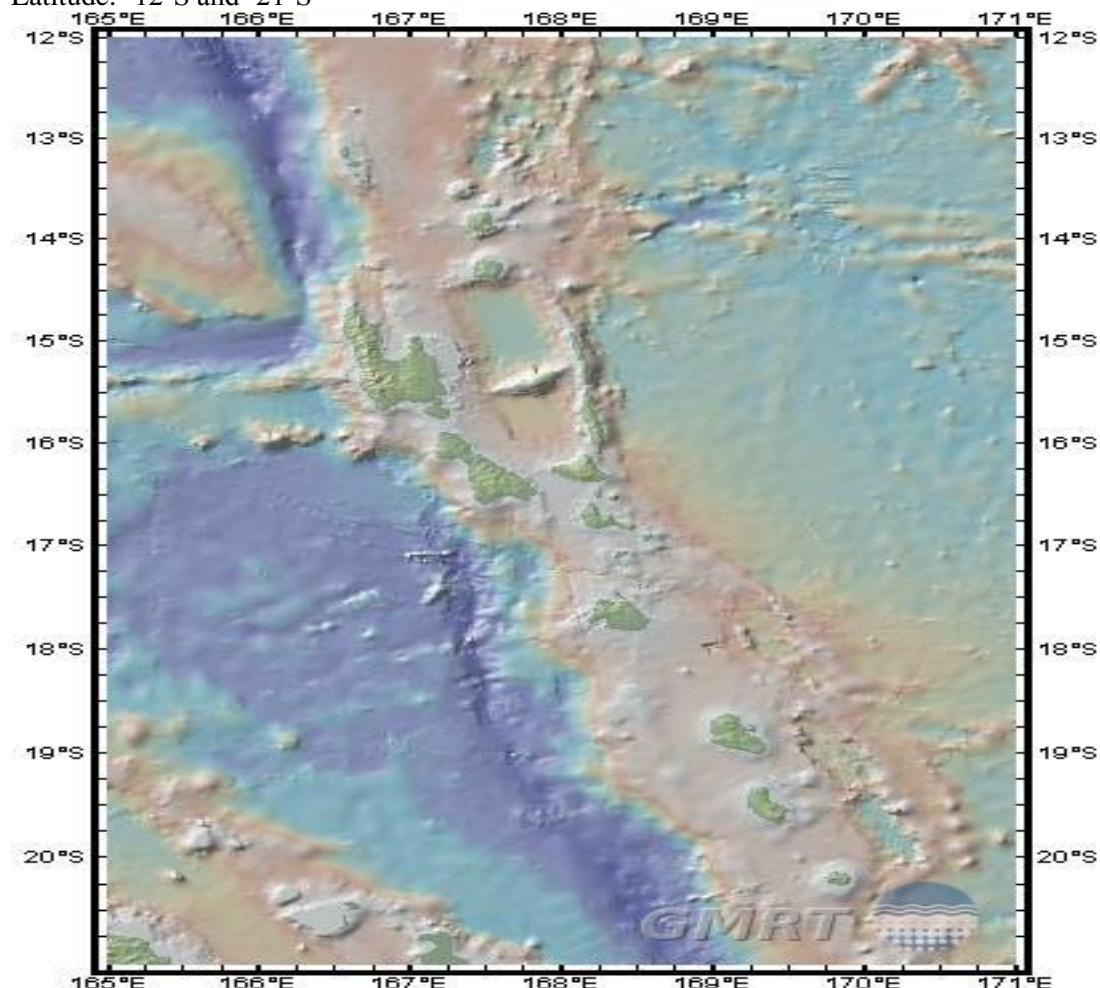


Figure 1: Vanuatu region

2. *Events happening in the area enclosed below are considered to be Vanuatu Local Events*

Longitude: 163°E and 175°E

Latitude: -10°S and -24°S

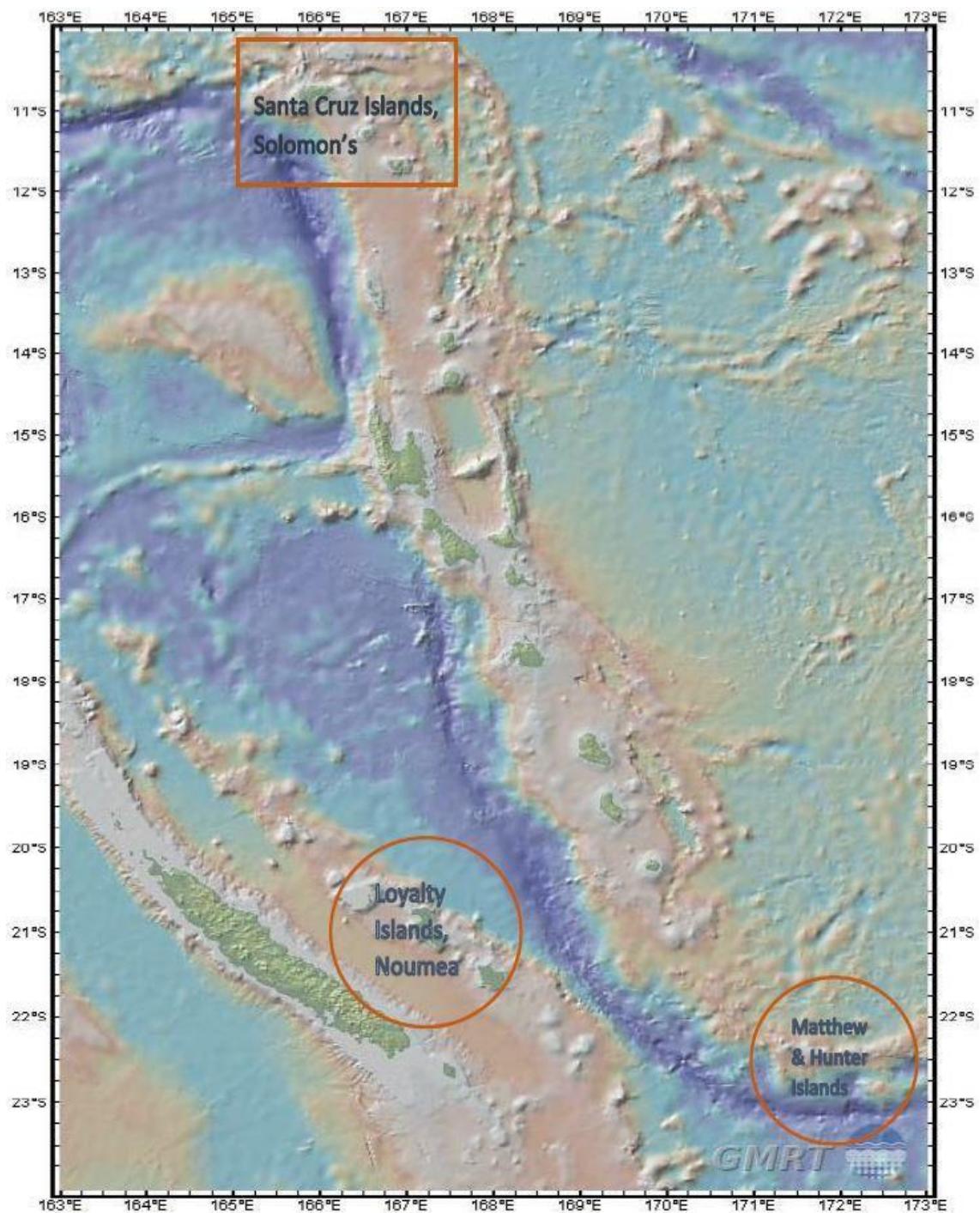


Figure 2: Vanuatu Local event

3. Below is the map showing the Earthquake epicenters recorded through our National Seismic Network (VNSN) after analysis.

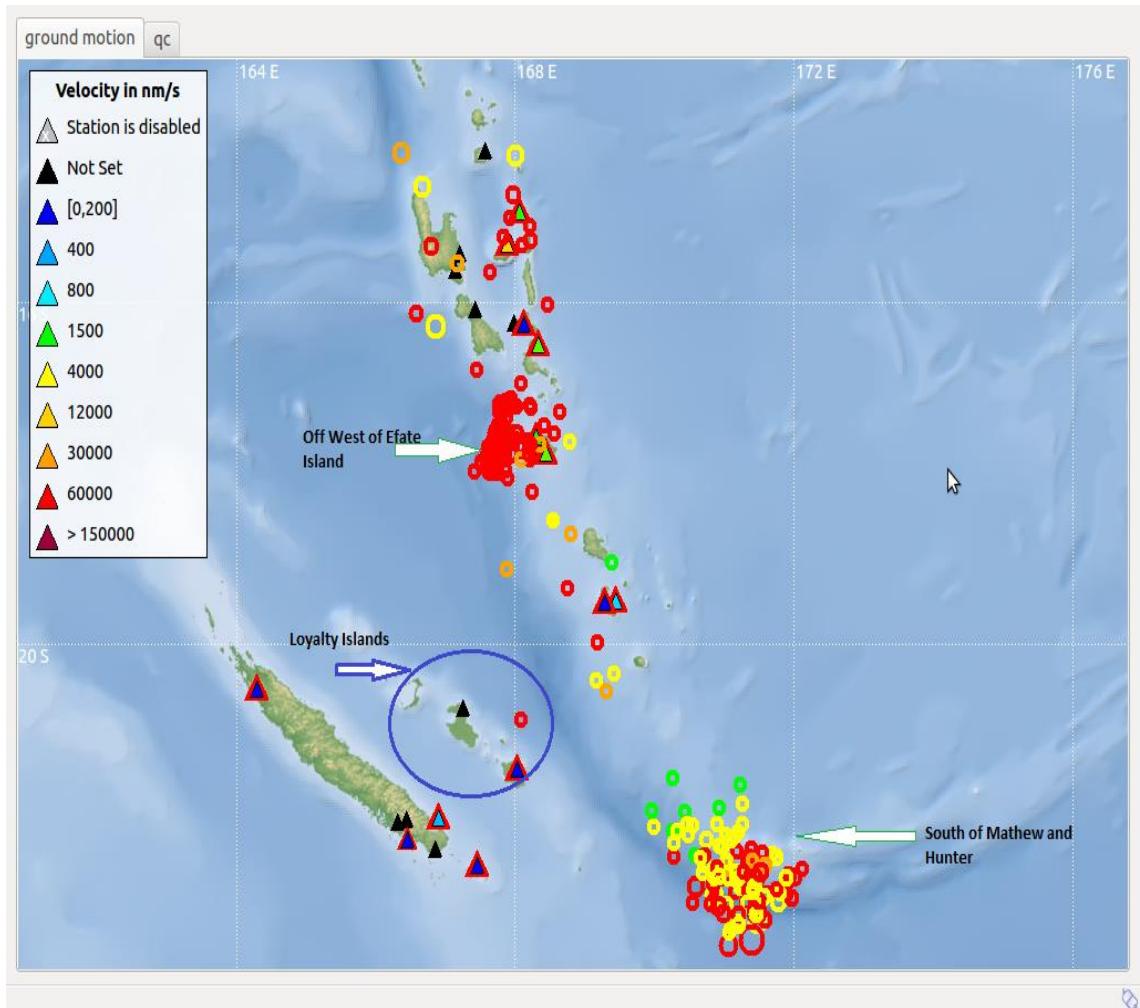


Figure 3: Seismic events from V

4. *Map showing the Epicenters*

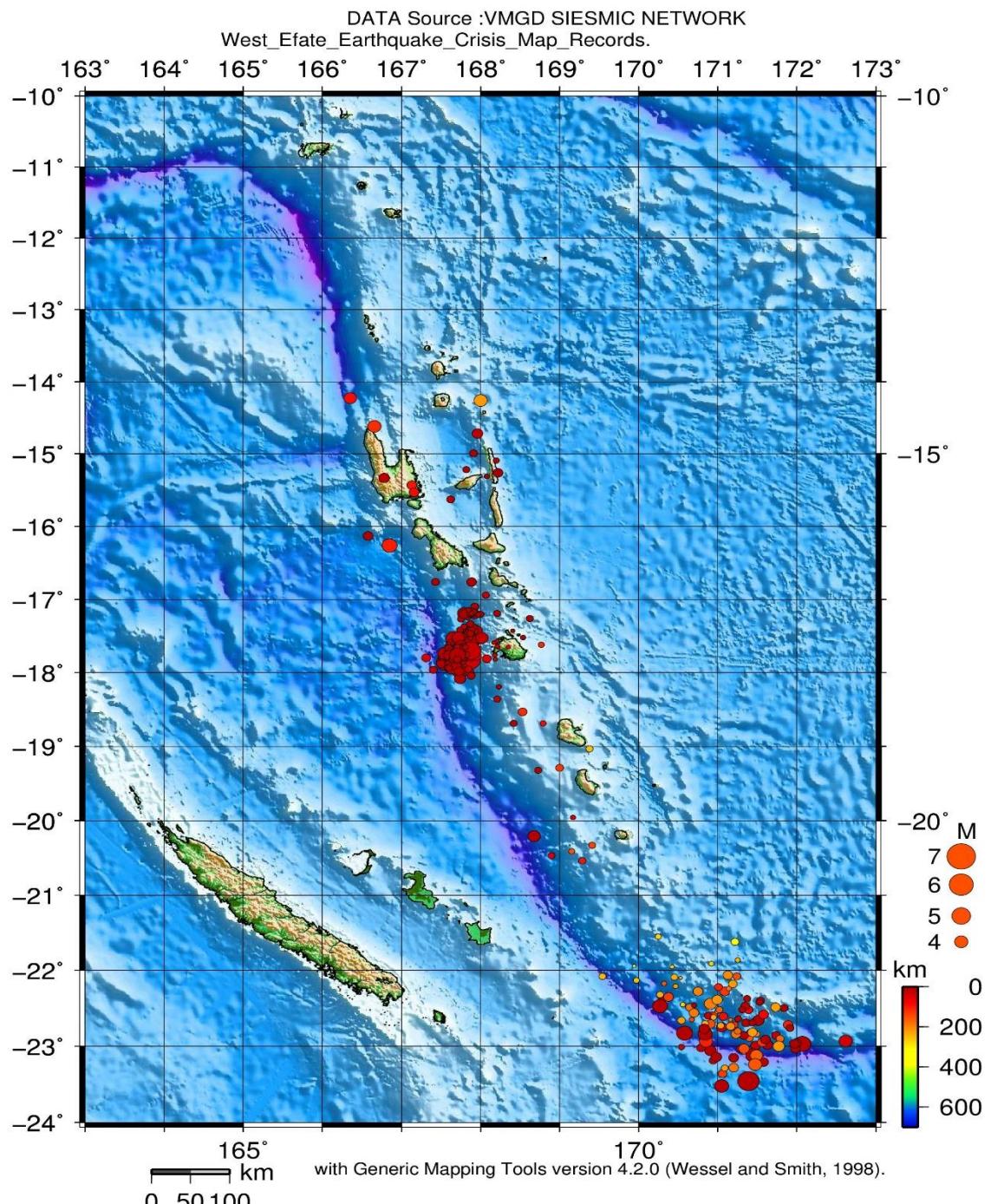


Figure 4: VMGD Seismic Network

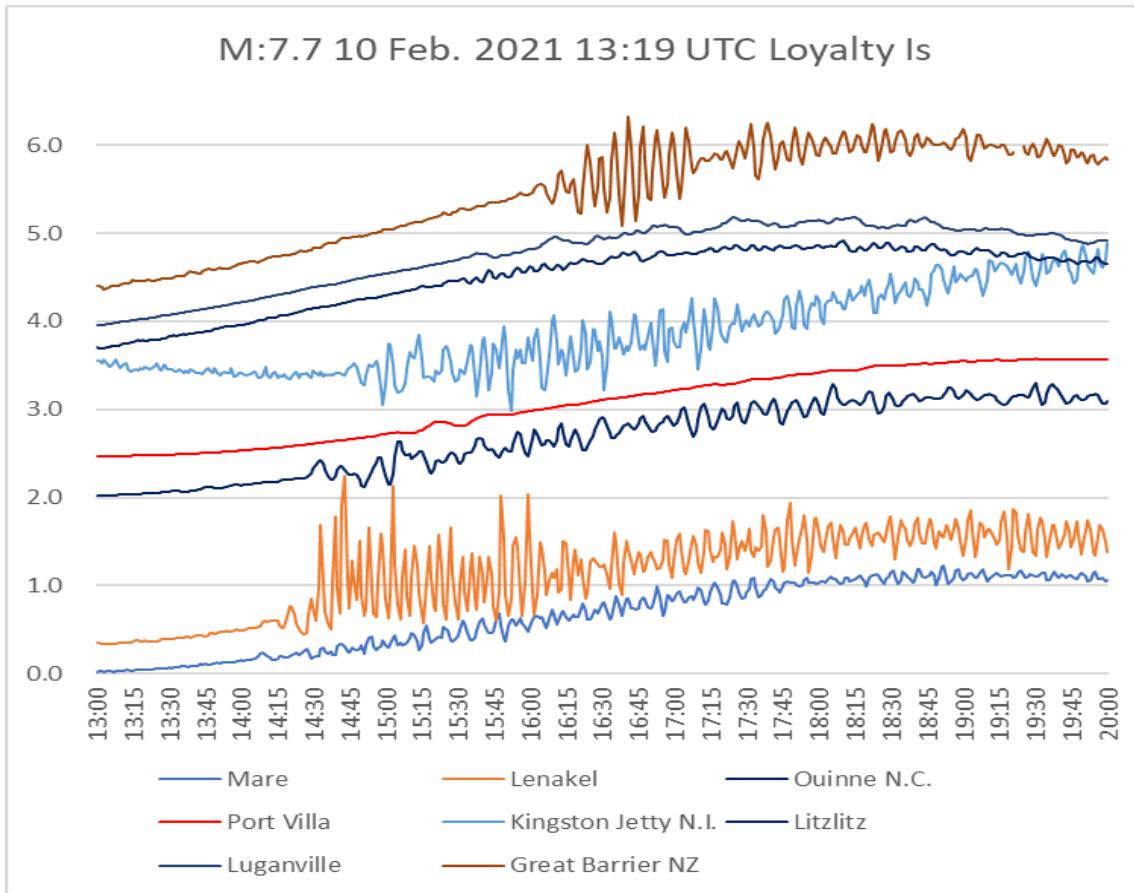


Figure 5: Tide Gauge Monitor

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