Tonga – Volcanic Eruption/Tsunami

ETC Situation Report #3

Reporting period: 26 – 31 January 2022

The ETC in the Pacific was activated in 2016 under the structure of the Pacific Humanitarian Team (PHT) to support telecommunications preparedness in the region. The ETC in the Pacific is currently supporting the response to the eruption of the Hunga-Tonga-Hunga-Ha-apai underwater volcano and subsequent tsunami which hit Tonga on 15 January 2022.

Highlights

- The two national telecommunications providers—Digicel and the Tonga Communications Corporation (TCC)—have taken action to increase their network capacity to support users of the partially restored communications services.
- The damage caused to the Tonga fibre-optic undersea communications cable during the eruption is greater than estimated. Repairs to both the international and domestic communications lines are expected to take longer than originally anticipated.

Australian reflief items are unloaded at Fua'amotu airport in Tonga. Photo: Australian Defence Force.

- Three shipments of communications equipment dispatched by the ETC to support government and responders have been delivered in Tonga and are undergoing a three-day quarantine period in the government relief supply warehouse as part of the 'contactless' response.

Situation overview

One of the largest eruptions of the Hunga-Tonga-Hunga-Ha-apai underwater volcano in the past 30 years occurred on 15 January 2022. The eruption generated tsunami waves rising up to 15 metres, which hit the west coasts of Tongatapu, Ha'apai, and 'Eua Islands.

Ash debris continues to be cleared away from key operational areas. The Fua'amotu International Airport is operational. Heavy machinery is still needed to clear runways in Vava'u and Ha'apai Islands. Domestic travel is therefore still very limited. Debris clean-up has been completed in the port in the capital of Nuku'alofa.

Initial Damage Assessments (IDA) are being concluded. The government of Tonga National Emergency Management Office (NEMO) continues to coordinate relief distribution to affected communities in Tongatapu, Ha'apai and 'Eua.

Communications in Tonga

The eruption caused significant damage to the fibre-optic undersea communications cable, disconnecting the primary means of communication from and within Tonga. The specialized ship, CS

Reliance, is en route to the port of Nuku'alofa to assess and repair the damages and was expected to arrive in Tonga on 30 January. Reports indicate that the damage caused to the Tonga undersea communications cable during the eruption is greater than estimated. Repairs to both the international and domestic communications lines are expected to take longer than originally anticipated.

The services of the two national telecommunications providers—Digicel and the Tonga Communications Corporation (TCC)—have been partially restored with the use of back-up satellite communications, providing limited voice, SMS, and internet services. To increase their capacity, both providers have lifted the network block put in place when services were first restored. Data connectivity provided by these operators is still impacted as their networks are overloaded.

The Asian Development Bank (ADB) in Nuku'alofa has activated its back-up VSAT satellite connectivity services and is offering access to internet capacity for humanitarians on the ground, to enable international communications.

Severe communications gaps remain with the outer islands. The University of the South Pacific (USP) is operating VSATs to provide limited connectivity throughout the island groups of Ha'apai and Vava'u, which are situated 180 kilometres and 314 kilometres to the north-east of Tongatapu respectively.

Several government responders have access to satellite phones on the outer islands, which are being used to communicate with counterparts on Tongatapu and to coordinate assessment work with NEMO.

ETC Activities

Coordination

The ETC is supporting the response by addressing communications gaps for government and responders until national telecommunications providers have fully recovered, and the damaged undersea communications cable is repaired. Communications solutions deployed will assist the government response and enable the delivery of assistance to the affected population.

The government is maintaining 'contactless' measures in the response, meaning only equipment can be deployed and will be set up by national staff with remote assistance coordinated by the ETC. All equipment and items sent to Tonga must undergo a three-day quarantine in a government warehouse.

Communications equipment & services

Amid significant logistical challenges, the ETC and partners are deploying several shipments of communications solutions, via the landing stage in Brisbane, Australia. Assistance is being provided by the Logistics Cluster and WFP logistics unit in the Pacific. Airlifts from Brisbane to Tonga are being provided by the Royal Australian Air Force (RAAF).

Three satellite phones dispatched by WFP in Fiji have been received in Tonga, each credited with free airtime by Iridium. Following the three-day quarantine period in the government relief supply warehouse, the satellite phones are expected to be released to NEMO on 31 January, to be used as part of the government response. The ETC will remotely assist NEMO to operationalize the satellite phones and strategize on distribution of the equipment.

Three portable BGAN terminals pre-loaded with data provided by Télécoms Sans Frontières (TSF) have been airdropped into Tonga and are being held in the government warehouse for the three-day quarantine. One BGAN terminal is committed to be deployed for humanitarian coordination purposes by staff in the UN Resident Coordinator's Office (RCO) in Nuku'alofa while the two remaining terminals will support operations identified by NEMO on the ground. The ETC and TSF are preparing to provide the required remote technical support to set up the terminals.

The pre-configured VSAT connectivity equipment deployed by the University of the South Pacific (USP) and the ETC has also arrived in Tonga and is undergoing the three-day quarantine period. When released, the satellite equipment will be set up in the USP campus in Nuku'alofa to provide a common communications area for responders on the ground to communicate internationally.

Through partnership with the Government of Luxembourg, the ETC is preparing to deploy two 'flyaway' VSAT solutions from Dubai, UAE, to be airlifted to Tonga via the landing stage in Brisbane. The kits will provide connectivity services to support the response for three months until national communications are restored via repairs to the undersea cable. There is a support component built into the Government of Luxembourg solution which will ensure this equipment can be operationalized by national staff on the ground, with remote support from the ETC and Government of Luxembourg. The ETC is planning to hold further meetings with NEMO focal points on the deployment locations of these two kits to support the response.

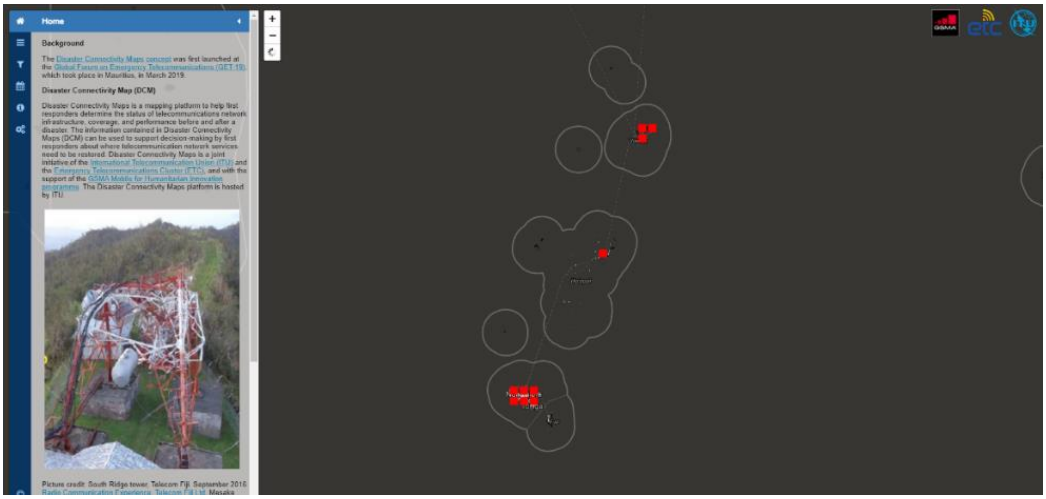
Six additional satellite phones pre-paid by Iridium have been prepared for shipment by the International Telecommunication Union (ITU) from its office in Geneva, Switzerland, to Tonga (via Brisbane), once the accompanying three SIMs have been received from Iridium. ITU is following up on shipping delays of the SIMs to Geneva.

Intelsat and the ITU regional office in the Pacific continue their efforts to operationalize their satellite connectivity equipment in Tonga to provide connectivity services for the government. Intelsat and ITU are working with the Tongan Ministry of Communications to support this activity.

Following a request from NEMO, the ETC explored several options to potentially enable government capacity in using Unmanned Aircraft Systems (UAS) to conduct damage assessments. It was found that UAS capacity exists in country although there is need for advanced training for government staff on operating the equipment. The ETC is facilitating discussions between the Ministry of Communications and national clusters for them to develop existing capacity with national actors.

Mapping

Through its Disaster Connectivity Map (DCM), ITU continues to map the status of connectivity in Tonga. There has been no significant change observed over the past week, with most connectivity detected on Tongatapu. However, red data points (indicating connectivity) were observed in Pangai in the Ha'apai group of islands, as well as in the Vava'u island group. For reference, the areas shown in red indicate the recent presence of connectivity while the areas shown in white indicate baseline connectivity data mapped before the emergency.



Information

The ETC Dashboard on the response in Tonga can be seen here.

Challenges

There are substantial logistical challenges in reaching remote and outlying areas of Tonga with existing assets to assess damage and assist affected populations, as well as shipping communications equipment internationally by air or sea.

Severely damaged communications systems have hampered capacity to conduct rapid assessments and impacted on establishing communication with the Tongan NEMO.

Tonga has very strict COVID-19 protocols that need to be adhered to, including a three-day quarantine for incoming communications equipment.

Funding

The ETC and partners are using existing communications equipment in stock and in-kind contributions from partners to support the response in Tonga.

Meetings

A Global ETC Joint teleconference will take place on **Wednesday 2 February 2022** at **06:00 UTC**.

Contacts

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All information related to the ETC response in Tonga can be found on the website:

www.etcluster.org/emergency/tonga-volcanic-eruptiontsunami

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