Tonga – Volcanic Eruption/Tsunami

ETC Situation Report #7
Reporting period: 24 February – 2 March 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 ETC in the Pacific and the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) have reassessed emergency telecommunications needs in Tonga, following the repair of the international section of the undersea communications cable on 22 February.

- The stakeholders have identified an ongoing need to support communications with the outer islands of Tonga. It may take until late 2022 to repair the domestic section of undersea cable.

Two portable satellite terminals—credited by TSF—are activated for connectivity in Vava'u. Photo: Feleti Tu'ihalamaka/Tonga MEIDECC

- Several preparedness and response measures are being planned based on lessons learned from the current emergency, including strengthening of the HF/VHF radio communications system across Tonga. The development of a National Emergency Telecommunications Plan (NETP) with ETC partner, ITU, is also being initiated by the government.

Situation overview

The Hunga-Tonga-Hunga-Ha'apai undersea volcano in Tonga erupted on 15 January in a blast that was felt across the entire Pacific region. The eruption caused severe disruption to communications in and from Tonga, as the undersea fibre communications cable connecting Tonga to the world and its own islands was severed in two locations.

The Government of Tonga declared a state of emergency on 16 January.

As of 25 February, there are 178 active cases of COVID-19 in Tonga. On 27 February, the government extended lockdown measures in Tongatapu and the Vava'u island group. The remaining outer island groups—Ha'apai, 'Eua, Niuafo'ou, and Niuatoputapu—are not under lockdown.

All relief items delivered in Tongatapu continue to be held in the government relief supply warehouse for 72 hours before being released.

Communications in Tonga

As of 22 February, the international section of the undersea communications cable has been repaired by the CS Reliance. Data, SMS, and voice services provided by the two national providers in Tonga—Digicel and the Tonga Communications Corporation (TCC)—are available to use by the population on Tongatapu. Through Digicel and TCC, some connectivity from Tongatapu extends to 'Eua and the surrounding small islands.

Communication with the outer islands of Tonga remains a challenge as the domestic section of cable—also damaged during the volcanic eruption—has not yet been repaired. The domestic section of cable links Tongatapu to the outer islands of Ha'apai and Vava'u. According to a report from Tonga Cable Limited (TCL), repairs to the domestic cable may take up to 6-9 months due to the need for a different type of fibre cable. Therefore, communications with the outer islands of Tonga are not yet fully restored.

ETC Activities

Coordination

The ETC in the Pacific and the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) have reassessed emergency telecommunications needs in Tonga, following the repair of the international section of the undersea communications cable. They have identified an ongoing need to support communications with the outer islands of Ha'apai and Vava'u.

Connectivity services

The large connectivity capacity of the 'flyaway' VSAT kits dispatched by the Government of Luxembourg is confirmed as required for the ongoing emergency operation to connect the outer islands of Tonga. The units have been transported to Amberley Airbase outside of Brisbane in readiness for airlift to Tonga by the Royal Australian Air Force (RAAF) on 3 March.

Global ETC is following up with the service provider in Luxembourg to deliver three additional modems to Tonga to augment the connectivity capacity provided by the flyaway VSAT kits provided by the Goverment of Luxembourg.

The Ministry of Communications in Tonga has reached out to the ETC in the Pacific to report a fault with one (out of two) BGAN terminals providing connectivity in the MEIDECC District Emergency Management Committee (DEMC) facility in Vava'u. Télécoms Sans Frontières (TSF), who provided the SIM card data for the BGANs, is working with the ETC to provide technical support to bring the BGAN terminal back online.

The need for additional BGAN terminals is being further discussed with MEIDECC. The International Telecommunication Union (ITU) has put a set of Inmarsat BGANs with free data on standby to dispatch for use on the outer islands of Tonga, if required.

The ITU regional office supporting the Pacific continues to provide data connectivity services to the Tonga Meteorological Services in Fua'amotu International Airport via a prepositioned VSAT and with partnership from Intelsat.

ITU has also set up VSAT equipment in the Tonga Geological Services (TSG) centre in Nuku'alofa.

Voice services

Six Iridium satellite phones and three SIM cards dispatched by ITU have been released from the government quarantine facility in Tonga and issued to responders. There are now a total of nine satellite phones deployed as part of the ETC response in Tonga (the first three were dispatched by WFP in Fiji).

Radio communications services

The radio communications project across six island groups—Tongatapu, 'Eua, Ha'apai, Vava'u, Niuatoputapu and Niuafo'ou—is being planned to improve emergency communications with the outer islands as part of preparedness and response measures. In partnership with the Ministry of Communications, the ETC in the Pacific is planning to:

1. Expand the existing HF radio network;
2. Strengthen the coastal VHF radio network;
3. Provide basic drone capacity for aerial surveys of ICT infrastructure.

The scope of work document for this project is being drafted, based on the requirements of the Tongan authorities.

Other communications support

Other support provided to the government of Tonga as part of the response includes:

- The 50 Starlink terminals sent to Tonga by SpaceX (seven units distributed to TCL to augment capacity in Ha'apai and Vava'u) will provide limited capacity to meet the needs of responders operating in the outer islands. There still remains a need to deploy connectivity solutions with a larger capacity in the outer islands.

- Seven 'Chatty Beetle' units[1] sent to Tonga by USAID's Bureau for Humanitarian Assistance (BHA) have been assigned to the Tonga Meteorological Service to re-establish early warning systems with the outer islands.

- Two satellite phones including SIM cards have been assigned to the Tonga Meteorological Services as requested, dispatched by UNESCO in the Pacific through the Intergovernmental Oceanographic Commission (IOC) tsunami unit.

Information

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

Mapping

Through its Disaster Connectivity Map (DCM), ITU continues to map the status of connectivity in Tonga. Over the past week, normal levels of datapoints have been detected on Tongatapu and some on the island of 'Eua. No datapoints have been detected on the outer islands, as expected.

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[1] Chatty Beetle is a portable Iridium satellite terminal that permits text-based alerts and messaging in remote locations, where communication options are limited.

Funding

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

On 15 February, funding of US$250,000 was confirmed from the Central Emergency Relief Fund (CERF) to support the ETC in the response to the volcano eruption and subsequent tsunami in Tonga.

A further contribution of US$217,000 has been received from the Government of Japan to support the ETC response.

Challenges

Logistics challenges continue to impact on the timely shipment of equipment to Tonga, including disruptions in global supply chains, issues with import levies, and the availability of flights for cargo.

The COVID-19 lockdown enforced in Tongatapu since 3 February is impacting on the movement of ETC focal points in country.

Meetings

A Global ETC Joint teleconference will take place on **Wednesday 9 March 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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