Tonga – Volcanic Eruption/Tsunami
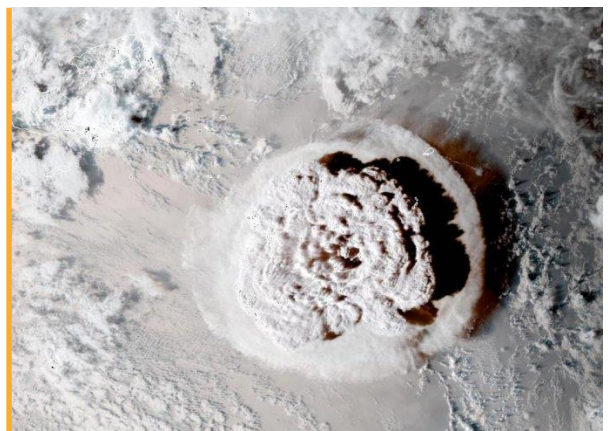
ETC Situation Report #1
Reporting period: 15 – 20 January 2022

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 supporting the response to the Hunga-Tonga-Hunga-Ha-apai underwater volcano and tsunami.

Highlights

- The eruption of the Hunga-Tonga-Hunga-Ha-apai underwater volcano and subsequent tsunami has caused significant damage across the Tongatapu and Ha'apai Islands, impacting more than 80 percent of Tonga's population.

- The impact on both international and domestic communications has been severe, due to damage inflicted by the eruption on Tonga's undersea communications cable.

- The ETC Coordinator in the Pacific is liaising with regional actors to support Tonga in re-establishing communications

The Hunga Tonga Hunga Ha-apai underwater volcano eruption on 15 January 2022 was one of the largest in 30 years. Photo: © UNICEF

to support the delivery of assistance. Critical communications equipment is being deployed to ensure government and responders have access to communication tools to coordinate the response, and to provide the affected population with means to contact family.

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 Islands, 'Eua, and Ha'apai Islands. There are reports of significant infrastructural damage on Tongatapu, the main island, as well as on the islands of Mango, Fonoifua and Nomuka situated north-east of Tongatapu in the Ha'apai region. There is limited visibility on impact to many of the outer islands. The government is carrying out damage assessments and deploying relief vessels.

About 84,000 people—more than 80 percent of Tonga's population—have been impacted by the volcano's eruption.

Nuku'alofa, Tonga's capital, is covered with a two-centimetre-thick layer of volcanic ash and dust. The first flight carrying assistance to Tonga was able to depart on 20 January after the main airport runway was cleared of ash left by the eruption.

Impact on communications

Both international and domestic communications were severely interrupted by damage sustained to the undersea communications cable. Preliminary testing indicated a break in the 827 kilometre-long Tonga cable, about 37 kilometres offshore from Tonga's capital, Nuku'alofa. Another cut in the domestic cable is situated 47 kilometres offshore. A vessel to repair the cable is being prepared to dispatch from Papua New Guinea (PNG). The damage is likely to take several weeks to repair, limiting means of communication within and from Tonga. The priority of the repair work will be to restore international communications services to the main island of Tongatapu, which would cover 80 percent of bandwidth needs.

Some satellite communications (mainly satellite phones) are hampered by the massive volcanic ash cloud.

The main telecommunications service operator—Digicel Tonga—is working to restore its services, including options to provide back-up internet services while the undersea cable remains damaged. On 19 January, Digicel re-established international voice services on Tongatapu but this network has become rapidly congested.

Communications with the outer islands remains extremely limited.

The government of Tonga has identified telecommunications as one of two priority areas in the response.

ETC Activities

Coordination

The ETC Coordinator in the Pacific is liaising with regional actors to support Tonga in re-establishing communications to support the delivery of assistance. The cluster continues to assess the situation through ongoing ETC preparedness operations in the Pacific.

While the main service provider—Digicel Tonga—is working to fully re-establish local and international data communications, there is a critical need to ensure government and responders have access to communication tools to coordinate the response and to provide the affected population with means to contact family.

Communications equipment

The ETC is deploying three portable satellite terminals for internet connectivity and voice services from Fiji to Tonga, via a landing stage in Brisbane set up as part of regional preparedness actions by the government of Australia. Each terminal can support an assessment team or a limited number of users to exchange emails. Télécoms Sans Frontières (TSF) is supporting the response with SIM card credit to equip the three portable satellite terminals being shipped to Tonga.

As part of a pre-existing preparedness partnership, the ETC in the Pacific is engaging with the University of the South Pacific (USP) to deploy a pre-configured VSAT satellite ground-station from Fiji via Brisbane to provide temporary internet connectivity services in Tongatapu to support the response until the undersea cable is repaired.

The ETC has also dispatched three WFP satellite phones, together with equipment to support the USP VSAT planned to be set up in Tongatapu.

USP has already established connectivity services using a VSAT in the Ha'apai Islands as well as in Vava'u, a group of islands 241 kilometres north of Tongatapu. The connection can transmit and receive data and facilitate some voice calls and video-conferencing.

The International Telecommunication Union (ITU) is exploring options to leverage its Pacific project with the satellite group, Kacific, to support the government of Tonga with satellite communications. ITU is also ready to ship satellite phones equipped with SIM card credit for the use of the government in Tonga from its stock in Geneva, Switzerland.

Additional satellite equipment is being prepared and made available for the response from the Global ETC based in Dubai, UAE, if required.

The Asian Development Bank (ADB) in Tonga has a VSAT satellite terminal set up and operational in the capital, Nuku'alofa.

The United Nations Office of the Resident Coordinator (RC) in the Pacific, based in Fiji, has requested connectivity support for Tonga, as well as extended support across the Pacific region.

Mapping

ITU has launched the Disaster Connectivity Map (DCM) to show the status of connectivity in Tonga. The maps confirm the sudden loss of data connectivity following the volcano and tsunami on 15 January, using a 30-day baseline comparison. Extremely limited connectivity was shown on 16 January on the main island of Tongatapu and no datapoints or cellular coverage was seen on the outer islands. The maps can be used to indicate where data connectivity is being restored, as the response moves forward. Inputs received on 20 January show that some limited connectivity has been restored on Tongatapu and 'Eua. 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.

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.

The severely damaged communications systems is hampering capacity to conduct rapid assessments, and is also impacting on establishing communication with the Tonga National Emergency Management Office (NEMO).

Tonga has very strict COVID-19 protocols that need to be adhered to, to avoid contracting any cases on the island. Tonga is currently free from COVID-19.

Meetings

A Global ETC Joint teleconference will take place on **Friday 21 January 2022** at **06:00 UTC**.

Funding

At this stage, no funding appeal has been confirmed.

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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