

Post-Cyclone Rapid Assessment Assists Tongan Emergency Authorities

Written by Administrator

Monday, 17 March 2014 13:52 - Last Updated Thursday, 19 March 2015 13:28



12 March 2014, Secretariat of the Pacific Community (SPC), Suva, Fiji – A rapid post-disaster assessment recently conducted by specialists from the Secretariat of the Pacific Community (SPC) will help Tongan emergency managers better understand the impacts of Cyclone Ian and prepare for future storms.

In early January, Cyclone Ian devastated parts of Tonga, particularly in the Ha'apai island group. The category-five storm killed one person, injured 14 others, displaced more than 4,000 people, and destroyed food crops and infrastructure.

In the wake of this storm, Tongan authorities requested assistance from SPC's Geoscience Division (GSD) to assess damages on island of Lifuka in the Ha'apai Group.

'They wanted us to provide technical data on the extent of inundation and erosion in coastal zones as well as water supplies and groundwater contamination in Lifuka,' SPC Senior Technical Assistant and Oceanographer Zulfikar Begg explains. 'They also asked us to train their geology staff so that they could do the same rapid assessments in the outer islands.'

Having previously completed extensive baseline surveys of Lifuka's coasts and water resources in 2011 as part of the Pacific Adaptation Strategy Assistance Programme (PASAP), the SPC team arrived in Lifuka on 28 January ready to hit the ground running.

What did they find? According to Begg, 'There was a lot of inundation – up to 94 meters measuring from the base of the beach. Because of that inundation impact, now at spring tides and high tides, the water moves further inland than it used to. At high tide, the water moves up to the road or sometimes into the compound of the government buildings.'

Lifuka has faced serious coastal inundation challenges since the island shifted following an

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earthquake in 2006. Much of the island's key infrastructure, including the hospital and government buildings, is now very vulnerable to flooding. The seawalls, sandbags and structures built to protect the coast in the last few years were scattered by Cyclone Ian, reports Begg.

Data collected by the SPC team will be used to generate an animated wave model, allowing emergency managers to visualise how the waves impacted the coast during the storm. This will help authorities better anticipate future cyclone events.

In addition, says Begg, 'The Tongan government will use our data to decide whether to build houses in the same area with improved building codes or to move them elsewhere.'

For more information, contact Molly Powers-Tora (tel: +679 338 1377; email: mollyp@spc.int) or visit the SPC website:

www.spc.int