# Samoa upgrades ICT to support Multi Hazard Early Warning System for All

The role of Information Communication and Technology (ICT) is an important and integral component of Multi-Hazard Early Warning Systems (MHEWS), that manage and deliver alerting messages to those in affected areas and wider at national or international level which allows them to take action to mitigate the impacts of the hazard.

Samoa has an estimated population of 205,557 (2021 Census) with 97% residing in the coastal areas. And like most Pacific island counties, Samoa is adapting to the adverse effects of climate change through established systems that enhances community resilience and response to natural hazards. Such systems includes the setup of a MHEWS that if implemented effectively will provide capabilities to warn communities to take timely actions and reduce their risks from the impacts of hazards. The integrated system with multi-hazard functionality to predict hazards like cyclones, tsunamis, storm surges as well as disseminate warnings, is an added security for all peoples. Warnings are disseminated through various platforms including radio, television, mobile networks, satellite network, social media, internet and it relies heavily on critical infrastructure and ICT support.

In this regard, Samoa is undergoing major ICT upgrades with the Ministry of Natural Resource and Environment (MNRE), Samoa Meteorological Division (SMD), Water Resources Division (WRD) and the National Emergency Operation Centre (NEOC). This initiative is funded through the Pacific Resilience Program (PREP), funded by the International Development Association (IDA), World Bank, supporting Samoa, Republic of the Marshall Islands and Tonga on the development of MHEWS with support from the Pacific Community (SPC) and the Pacific Islands Forum Secretariat (PIFS).

According to Fesola'i Molly Faamanatu Nielsen, Assistant Chief Executive Officer Disaster Management Office. "Samoa is very fortunate to be given the opportunity to upgrade its ICT system as part of PREP. As the lead coordinator for national response to disasters, this upgrade will ensure the timely release of warnings to communities and to better coordinate efforts pre, during and post disasters. This million dollar investment is setting up much needed computer servers for data backup and work stations with forecasting application and analysis as well as integrating all warning systems from Meteorology Division, Water Resource division (for flooding) directed to NEOC. This will mainstream communication and dissemination of warnings in an integrated approach. A milestone worth celebrating as to date, our systems have been in silos and there were ongoing challenges to upgrade due to budget constraints and aging ICT infrastructure. This initiative will transform our accessibility to fast, reliable and timely release of warnings to our stakeholders and communities".

The ICT upgrade will continue for the next couple of months and is complementary to ongoing efforts of the PREP project to reduce fragmentation and establish integrated robust systems to prepare, respond and adapt to the changing climate and ocean. Other milestones under PREP Samoa includes the funding of the supervision and construction as well as the fully equipping and establishment of the NEOC centre at Tua'naimato as well as funding the consultation, drafting and passing of the new Samoa Meteorological Act 2021 that regulates the management of meteorology (weather and climate), geo-science and ozone services as well as the establishment of the MHEWS. The PREP project also initiated the need for a Multi-Hazard Early Warning System Policy for Meteorological, Hydrological and Geophysical which was developed and approved for implementation in 2022.

The PREP project since its commencement has not only highlighted the critical role of the agencies involved in the MHEWS but also funded the investments such as the digital transformation of MNRE operational

services relating to Multi-Hazard warning that includes equipping the new NEOC and strengthening the MHEWS wider network between NEOC, SMD and WRD sites to ensure operational data is shared and available to all emergency warning services. It will significantly contribute to reducing the fragmentation, costs and time spent in managing and operating standalone systems to fully integrating to allow efficiency gains throughout operations pre-during and post disasters or emergencies.

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*Figure 1: IT teams assembling Computer Server Rack for Samoa Meteorological Division*

*Figure 2: MHEWS Consultant discussing with ACEO Fesola'i Molly Faamanatu Nielsen MHEWS*

*Figure 3:  2 additional smart racks added to NEOC server with capabilities to help run models and backup support to EWS.*

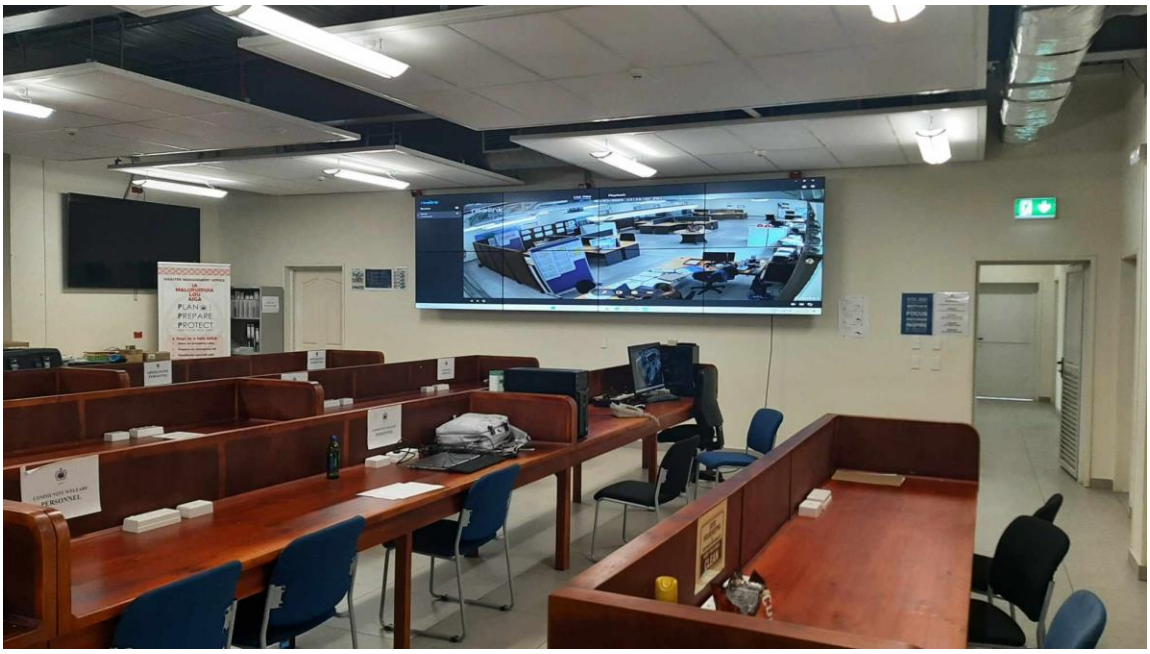


*Figure 4: Overview of Operations Centre at NEOC funded through PREP WB Project*