

National capacity assessments of Tsunami Warning and Mitigation Systems in Pacific countries

Assisting SOPAC member countries assess their capacity to receive, communicate and respond effectively to tsunami warnings

The Australian Bureau of Meteorology (the Bureau), in partnership with Emergency Management Australia (EMA), the Pacific Islands Applied Geoscience Commission (SOPAC), and with the assistance of the Intergovernmental Oceanographic Commission, a division of the United Nations Educational, Scientific and Cultural Organization (UNESCO/IOC), is working in collaboration with SOPAC member countries to assess their capacity to receive, communicate and respond to tsunami warnings. The project is funded by the Australian Agency for International Development (AusAID) and complements the Pacific component of the Australian Tsunami Warning System Project.

By undertaking an assessment of the capacity of individual nations to manage tsunami events, the project aims to better guide donor funding towards achieving targeted improvements in the tsunami warning and mitigation systems in these countries.

The key deliverable of the project is a comprehensive set of reports, including one specific to each country, detailing the strengths and needs of the countries with regard to tsunami warning and mitigation, including recommendations on how to address priority issues.

The fourteen SOPAC member countries participating in the project are the Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, the Marshall Islands,

Nauru, Niue, Palau, Papua New Guinea, Samoa, the Solomon Islands, Tonga, Tuvalu and Vanuatu.

The Australian Tsunami Warning System's relationship with the southwest Pacific

The Bureau, in partnership with Geoscience Australia (GA) and EMA, is currently undertaking a four-year project to establish the Australian Tsunami Warning System (ATWS).

The primary objectives of the ATWS are:

1. To contribute to the facilitation of tsunami warnings for the southwest Pacific.
2. To support international efforts to establish an Indian Ocean tsunami warning system.
3. To provide a comprehensive tsunami warning system for Australia.

The southwest Pacific nations currently receive their tsunami warnings from the Pacific Tsunami Warning Centre (PTWC) based in Hawaii. SOPAC Member countries will benefit from the development of the ATWS through an expanded network of seismic and sea-level observing stations that will feed relevant data to the PTWC.

Throughout the southwest Pacific, existing sea-level observation stations useful for tsunami warning are being upgraded and additional new stations are being installed. Data from these stations will be available to the inter-

national community via the World Meteorological Organization's Global Telecommunications System (GTS) and the Bureau's registered user web pages. Affected countries can then use the enhanced PTWC tsunami advisories to assist in warning their own populations.

The tsunami capacity assessment project will contribute to the achievement of objective 1 – facilitation of tsunami warnings for the southwest Pacific.

Project aim

The tsunami capacity assessment project takes a collaborative approach by drawing on the skills of both regional experts and experts within each country. The focus of the project is to achieve:

- Understanding within SOPAC member countries of the specific requirements to receive, issue and respond effectively to tsunami warnings.
- The provision of information to potential donors sufficient to support targeted strengthening of priority tsunami response areas in SOPAC member countries.
- The acquisition or development of skills within the SOPAC Secretariat and SOPAC member countries to allow local completion of future assessments and maintenance of this knowledge, with or without external support.
- Understanding within SOPAC member countries of the operation and capabilities of the PTWS and ATWS.



*Tsunami Capacity Assessment Team and Tongan National Experts, Nuku'alofa, Tonga, May 2007
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- Enhanced relationships among Australian and key national government counterparts in SOPAC member countries to facilitate ongoing sharing of information, transfer of expertise, and capacity development.

Assessment process

National assessments in each SOPAC member country will be conducted by visiting teams working together with experts from each participating country. The visiting team will include experts in the fields of tsunami warnings, emergency management, regional disaster management, data and warning communications. The visiting team will meet with in-country experts during a four-day workshop involving government agencies and non-government

organisations involved in tsunami and/or natural disaster management. The in-country participants will then assist with completing a questionnaire covering all aspects of tsunami warning and mitigation.

The questionnaire for the Pacific Island Countries will be a modified version of that used for the Indian Ocean. The Indian Ocean questionnaire was jointly developed by UNESCO/IOC, SOPAC, the World Meteorological Organization (WMO) and the International Strategy for Disaster Reduction (ISDR).

The questionnaire is broken down into the following categories:

- authority and coordination;
- international and regional co-operation;
- research expertise;
- tsunami monitoring infrastructure;

- tsunami warnings and emergency response;
- tsunami hazard, vulnerability and risk;
- public and stakeholder awareness and education;
- tsunami response case study (to a recent tsunami warning event particular to that country).

The aim of the assessments is to complete the questionnaire, gather supporting documents and visit locations within the country that are key to tsunami warning and mitigation. These activities will ensure a complete understanding of tsunami warning and mitigation capacity is developed for each country.

All information collected in-country will feed into a comprehensive national report for each country. The reports will review the country's strengths and needs and

outline steps that could be taken to address the identified requirements. Consultation with individual countries is an integral part of the report writing process.

In-country participants

The visiting assessment team will be interested in meeting with as many in-country tsunami warning and mitigation experts as possible. Areas of expertise include tsunami warning, emergency response and preparedness, public education and research and development.

Agencies and organisations typically involved include, but are not limited to, National Emergency/ Disaster Management Offices, Meteorological and Hydrological Services, Geoscience/

Natural Resources/Environment Ministries, Church Councils and Groups, Marine and Port Authorities, Defence Services, Police Services, Fire Services, Foreign Affairs Ministries, Non-Government Organisations, Communication Corporations, Agriculture/ Fisheries/Forestry Ministries and the Media.

Reporting

The final reports from this project will be made readily available to SOPAC member countries, SOPAC, AusAID and potential donors to facilitate capacity-building programs. Each country will be consulted before reports are finalised to ensure the proposed content and report recipients are appropriate.

Indian Ocean equivalent project

The tsunami capacity assessments that will be conducted in SOPAC member countries are complementary to those completed in the Indian Ocean. The Indian Ocean project was called Assessment of Capacity Building Requirements for an Effective and Durable Tsunami Warning and Mitigation System in the Indian Ocean.

For further information on the Indian Ocean project refer to <http://ioc3.unesco.org/indotsunami/nationalassessments.htm>



Tsunami destruction, Gizo, Solomon Islands (© Roger Wheatley, AusAID).



Forming partnerships – discussions with Tongan Meteorological Service in May 2007 (© Australian Bureau of Meteorology).

For further information visit www.bom.gov.au/tsunami/picassessments or contact:

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