



**SOPAC Member Countries
National Capacity Assessments:
Tsunami Warning and Mitigation Systems**

Tuvalu



Tuvalu



SOPAC

5. Assessment Results

5.1. Status of Key System Components

The Tsunami Capacity Assessment Workshop results are summarised below in Table 3 in which the status of key components of Tuvalu's tsunami warning and mitigation system are outlined (as at the date the Tsunami Capacity Assessment Workshop was held in June/July 2009, updates between then and the publication of this report are as marked).

Table 3: Summary of current status of key components of the Tuvalu tsunami warning and mitigation system as at June/July 2009.

Rating

Yes - fully realised
Partially realised
No - not realised

Key Component	Rating	Comment
Authority, Coordination and NGO Role		
Legislation in place for tsunami warnings and response	Yes	The National Disaster Act 2008 (NDA) covers the issue of tsunami warnings and the draft Tuvalu National Tsunami Plan (NDP) that identifies the Tuvalu Meteorological Service as the lead agency for issuing of tsunami warnings.
Tsunami coordination committee or effort at a National and local level	Partially realised	The National Disaster Act 2008 covers the formation of the National Disaster Committee (NDC) and National Disaster Preparedness Working Group (NDPWG) the functions and responsibilities of which are identified in the National Disaster Plan (D1). It has been noted that the NDP has recently been reviewed.
Agency responsibilities clearly defined	Partially realised	The agency responsibilities are defined within the NDP but only in very broad terms.
NGOs have a defined role in tsunami warning dissemination, preparedness and awareness and emergency response	Partially realised	This is a secondary role for TANGO and the Churches as they only provide an informal warning dissemination role. However, TANGO in particular provides preparedness and awareness training as well as risk management. The Churches play a significant role in the provision of counselling disaster victims and their families.

Key Component	Rating	Comment
International and Regional Cooperation		
Country represented at an international and regional level to aid cooperation in tsunami warning and mitigation efforts	Partially realised	Tuvalu is a member of the IOC and the sea level and seismic data contributes to the international provision of tsunami warnings. The Tuvalu Red Cross (TRC) also provides regional assistance when and as appropriate – e.g: the Solomon Islands.
Priorities		
Priorities established for implementation of tsunami warning and mitigation system at a National level	Partially realised	This was addressed during the workshop in Question 12 (see annexure, where participants identified current and planned activities required to establish an effective warning system. These have been captured in the recommendations.
Multi-hazard Approach		
Tsunami warning capabilities are being established within a multi-hazard framework	Partially realised	The Tuvalu Meteorological Service has an established tropical cyclone warning system that does provide the framework to incorporate tsunami warning. This has been captured in the draft Tuvalu National Tsunami Plan.
Research Expertise		
Active research is being undertaken within the country for seismology and tsunami to strengthen the tsunami warning and mitigation system	No	Not at this time.
Tsunami monitoring infrastructure		
Existence of seismograph stations and integration of real time data from these stations into the tsunami warning process	Yes	The FUNA seismic station is part of the Global Seismic Network array which feeds into the regional warning system provided by PTWC
Existence of sea-level stations and integration of real time data from these stations into the tsunami warning process	Yes	The Tuvalu sea-level gauge located on the Old Main Wharf is part of the Pacific Sea-level Climate Monitoring Project which includes installed gauges in the region. This data feeds into the regional monitoring system and provides some input into the warning system provided by PTWC.

Key Component	Rating	Comment
Sharing of seismic and sea-level data internationally to facilitate improvement of PTWC tsunami messages for the region	Yes	As per above. All data is available via the web.
Warnings		
Nation receives PTWC messages	Yes	The Tuvalu Meteorological Service is the primary recipient of warnings issued by PTWC
24x7 operational staff at warning receipt and dissemination location	No	Recommendations as a result of this workshop have been provided to address this issue
Disseminate national tsunami warnings as guided by a Standard Operating Procedure	Partially realised	The Tuvalu National Tsunami Plan outlines key agencies in the warning process however, a greater depth of detail including SOPs is required as indicated in the recommendations of the workshop
System redundancies in place for receipt of PTWC messages and dissemination of National warnings	No	Recommendations as a result of this workshop have been provided to address this issue
Redundant 24x7 methods available for dissemination of warnings to community (e.g. public radio, sirens etc.)	No	Recommendations as a result of this workshop have been provided to address this issue
Effective warning dissemination to remote communities	Partially realised	Recommendations as a result of this workshop have been provided to address this issue
Communications coverage of whole country that is effectively utilised for the dissemination of tsunami warning messages	Partially realised	Due to the limitations of the existing communication system, recommendations have been provided to address this issue
Issue of marine tsunami warnings and guidance for vessels, harbours and ports	Partially realised	There is no formal process for issuing warnings to mariners. SOPs need to be developed to address this as per recommendations

Key Component	Rating	Comment
Emergency Response and Evacuation		
Disaster preparedness and emergency response system has been reviewed and opportunities for improvement and training identified	Partially realised	Review of the National Disaster Plan and the draft National Tsunami Preparedness Plan should address this. This issue has been highlighted in the recommendations.
Tsunami emergency response, evacuation and recovery plan exists	Partially realised	The draft National Tsunami Preparedness Plan needs to be reviewed by the National Disaster Preparedness Working Group and tested as indicated in the recommendations.
The designated agency for evacuation is identified and have authority by law	Yes	As per the National Disaster Act (2008) and the National Disaster Plan (1997)
Plans have been made for safe evacuation of population centres including aspects such as maps, routes and signage	No	The draft National Tsunami Preparedness Plan identifies this as a responsibility. This has been highlighted in the recommendations.
Procedures are tested and exercised to improve the response through better planning and preparedness	No	The National Disaster Plan and the draft National Tsunami Preparedness Plan both need to be reviewed and tested. This has been highlighted in the recommendations.
Land use policies and building codes are in place to mitigate against the tsunami hazard	Partially realised	There is a building code developed for Tuvalu though not passed by Cabinet.
Tsunami hazard, vulnerability and risk		
Completion of studies to assess the tsunami hazard in the country or Region	No	This has been addressed in the recommendations from this meeting.
Local risk assessments have been completed for at risk communities	No	This has been addressed in the recommendations from this meeting.

Key Component	Rating	Comment
Adequate data exists and local inundation modelling has been completed for population centres	No	This has been addressed in the recommendations from this meeting.
Public and stakeholder awareness and education		
Measures have been taken to ensure the public understand and take action in the event of a tsunami warning being issued	Partially realised	This has been addressed in the recommendations from this meeting.
Community level education and preparedness programs exist on tsunami	Partially realised	This has been addressed in the recommendations from this meeting.
Training programs for the National media exist for natural hazard and tsunami	No	This has been addressed in the recommendations from this meeting.