



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

Niue



Niue



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 Niue’s tsunami warning and mitigation system are outlined (as at the date the Tsunami Capacity Assessment Workshop was held in May 2009, updates between then and the publication of this report are as marked).

Table 3: Summary of current status of key components of the Niue tsunami warning and mitigation system as at May 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	Partially	Legislative responsibility for issuing tsunami warnings is currently not formally defined. The Public Emergency Act 1979 (D5) makes a broad provision for formulation and implementation of disaster management policies and structures at a national level. The legislation does not specifically refer to the National Disaster Management Plan which outlines responsibilities across government for warnings, response and recovery for natural and man made hazards.
Tsunami coordination committee or effort at a National and local level	Partially	The NNDP (D1) 2008 articulates the roles and responsibilities of the NDC as the central coordinator for all hazards. (Refer NNDP Page A-5).
Agency responsibilities clearly defined	No	Although there is an outline of agency roles and responsibilities with the exception of the Police the lead agencies are not clearly defined. It is understood that a Meteorological Act has been proposed but as yet there is no draft available.

Key Component	Rating	Comment
NGOs have a defined role in tsunami warning dissemination, preparedness and awareness and emergency response	NA	NGOs do exist in Niue.
International and Regional Cooperation		
Country represented at an international and regional level to aid cooperation in tsunami warning and mitigation efforts	Partially	Through Niue's membership of WMO, SOPAC and IOC
Priorities		
Priorities established for implementation of tsunami warning and mitigation system at a National level	No	<p>The priorities under specific sub-headings identified by the workshop participants are as follows:</p> <p>Warnings:</p> <ul style="list-style-type: none"> • Provide for 24/7 receipt of warnings from PTWC to the Meteorological Service. • Re-introduction of the receipt of AFTN traffic to the Meteorological Service • Warn duty hospital staff doctor/nursing of potential tsunami event. • Appropriate systems/technologies including a high quality system such as a direct VSAT link and satellite phone for the receipt of warnings. • Maintaining the operational capability of all equipment and instrumentation associated with warning systems • Identify key stakeholders involved in the dissemination and response to tsunami warnings • Enhance warning system • Introduce “town crier” and traditional means eg bell, drums, • Enhance electronic media eg radio, TV • Efficient and effective receipt of international warnings and local dissemination. • Improved risk assessment and management by using a multi sectoral approach. • Provision of pre recorded tsunami warnings <p>Emergency Response:</p> <ul style="list-style-type: none"> • Effectively communicate to all stakeholder agencies the current authorities and responsibilities within the legislation and the NNDP • Scheduled regular exercises of the NNDP • Review and assess the current evacuation centres in terms of adequacy

Key Component	Rating	Comment
<p>Priorities established for implementation of tsunami warning and mitigation system at a National level cont</p>	<p>No</p>	<ul style="list-style-type: none"> • Recognition and adoption of traditional knowledge pertaining to hazardous events and disseminate this information • Provision of counselling post disaster • Enhancing the capacity to undertake damage and needs assessment post event <p>Community Awareness and Preparedness:</p> <ul style="list-style-type: none"> • Community workshops on evacuation planning • Programmes in schools • Competitions based on community awareness and preparedness • Radio/TV programmes • Encourage self reliance/initiatives <p>Capacity Building:</p> <ul style="list-style-type: none"> • Provide focused operational disaster management training • Provide focused technical training • Provide appropriate education for the community eg school curriculum • Provide the appropriate resources in terms of personnel, infrastructure and funding <p>Planning:</p> <ul style="list-style-type: none"> • Undertake disaster mitigation planning at the national level • Undertake disaster mitigation planning at the local level • The Meteorological Service to review the current cyclone plan with the view to develop a companion for tsunami events • Clarify roles and responsibilities of key warning agencies under the NNDP and NDC • Introduce specific national tsunami plan • The provision of an inundation map to support evacuation and development planning • Compliance with the Building Codes • Develop evacuation plans for the Primary School • Establish evacuation routes for the community
<p>Multi-hazard Approach</p>		
<p>Tsunami warning capabilities are being established within a multi-hazard framework</p>	<p>Partially</p>	<p>Although there is no specific mention of tsunami, tropical cyclone procedures are utilised in a modified form.</p>

Key Component	Rating	Comment
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	Partially	A GA seismographic station is located at the Meteorological Office. There is no real-time access to the data it provides. It was noted that a continuous GPS Station is located at the Meteorological Office operated by GNS Science New Zealand.
Existence of sea-level stations and integration of real time data from these stations into the tsunami warning process	Partially	There is a PTWC tide gauge at the Sir Roberts Wharf. There is no real-time access to the data it provides.
Sharing of seismic and sea-level data internationally to facilitate improvement of PTWC tsunami messages for the region	Yes	The data is accessible to PTWC.
Warnings		
Nation receives PTWC messages	Yes	The Meteorological Office is the primary recipient of the messages at this time.
24x7 operational staff at warning receipt and dissemination location	No	This is of significant concern and has been addressed in the recommendations.

Key Component	Rating	Comment
Disseminate national tsunami warnings as guided by a Standard Operating Procedure	No	Not at this time and this issue is addressed in the recommendations.
System redundancies in place for receipt of PTWC messages and dissemination of National warnings	No	It is understood that Telecom has the infrastructural capacity to receive PTWC messages. However, none have been received to-date and as such this process has never been tested.
Redundant 24x7 methods available for dissemination of warnings to community (e.g. public radio, sirens etc.)	Partially	Broadcasts by radio and TV are used once the warning has been received. As well, Police are despatched to identified remote villages and use their vehicle sirens and PA to alert the community. Church bells are not used.
Effective warning dissemination to remote communities	Partially	Refer above.
Communications coverage of whole country that is effectively utilised for the dissemination of tsunami warning messages	Partially	It is understood that there is not 100% communication coverage as some remote villages can not always receive radio and TV broadcasts. This is why Police are despatched to ensure they are appropriately warned.
Issue of marine tsunami warnings and guidance for vessels, harbours and ports	Partially	HF and VHF are provided by Telecom for marine. Also the Meteorological Office provides HF (Sailmail). This is an automated system and may not allow manual override at any particular time. This may limit its use during an emergency event.
Emergency Response and Evacuation		
Disaster preparedness and emergency response system has been reviewed and opportunities for improvement and training identified	No	An exercise was partially conducted some ago. However, areas of improvement were not identified and full testing of the plan was not achieved.

Key Component	Rating	Comment
Tsunami emergency response, evacuation and recovery plan exists	Partially	Covered in an all hazards approach context as contained within the NNDP.
The designated agency for evacuation is identified and have authority by law	Yes	The Niue Police.
Plans have been made for safe evacuation of population centres including aspects such as maps, routes and signage	Partially	There are currently no signage, maps and documented routes. There is also some debate over the suitability of identified evacuation centres/safe houses.
Procedures are tested and exercised to improve the response through better planning and preparedness	No	Refer above to comments of the partial conduct of an exercise.
Land use policies and building codes are in place to mitigate against the tsunami hazard	Yes	The Niue Sustainable Coastal Development Policy (D6) has just been formally ratified. As well, a National Building Code (D4) and a Home Building Manual (D3) are in use but have not been specifically developed for tsunami.
Tsunami hazard, vulnerability and risk		
Completion of studies to assess the tsunami hazard in the country or Region	Partially	Some work has been undertaken by GA and SOPAC to identify the overall threat to Pacific Islands Countries. However, no inundation modelling has been done.
Local risk assessments have been completed for at risk communities	No	Not at this time.
Adequate data exists and local inundation modelling has been completed for population centres	No	Not at this time.

Key Component	Rating	Comment
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	Some activities have been undertaken through both the primary and secondary school curriculums. However, there is not currently a specific program within the education curriculum.
Community level education and preparedness programs exist on tsunami	Partially	Some awareness activities within village communities are provided through BCN. It was noted that the use of BCN was significantly restricted due to their high fee for service costs.
Training programs for the National media exist for natural hazard and tsunami	No	However information is available to media outlets on request from the Meteorological Service.