# TOKELAU

# NATIONAL DISASTER RISK

# REDUCTION PLAN

## *DRAFT*

**Version 7**

**November 2011**

# Table of Contents

# Acronyms

| | |
|---|---|
| **MCDEM** | Ministry of Civil Defence & Emergency Management |
| **MFAT** | Ministry of Foreign Affairs and Trade |
| **MFAT IDG** | International Development Group (MFAT) |
| **MFAT SRU** | Special Relations Unit (MFAT) |
| **NEC** | National Emergency Committee – based in Apia |
| **PTWS** | Pacific Tsunami Warning System |
| **TALO** | Tokelau Apia Liaison Office |
| **UNDAC** | United Nations Disaster Assessment and Co-ordination |
| **UNDP** | United Nations Development Programme |
| **UN OCHA** | United Nations Office for the Coordination of Humanitarian Affairs |
| **UNESCO** | United Nations Environment, Science and Cultural Organisation |
| **VEC** | Village Emergency Committee – based on each nuku |

# 1. Introduction

## *1.1 Purpose and objectives*

The purpose of this document is to record the disaster risk management governance and related operational arrangements for:

- the sustainable management of hazard risks,
- the preparedness for,
- response to, and
- recovery from hazard events that threaten or impact Tokelau.

The objectives of the Plan are:

- providing for effective coordination and cooperative efforts amongst stakeholders in order to minimise and reduce the impact of hazards to Tokelau;
- ensuring that the Tokelau communities and supporting agencies are informed and ready to respond to any disaster;
- ensuring that processes and systems are in place for recovery and rebuilding after a disaster affecting one or more of the Tokelau atolls (nuku);
- outlining specific roles and responsibilities of all stakeholders to enable prompt, effective, appropriate, and coordinated responses.

The audience of the plan includes all of Tokelau, New Zealand government agencies and non-government organisations, Samoa, as well as regional and international partners. Because of this diversity the plan includes information about Tokelau to help those less familiar with Tokelau to better understand the disaster risk reduction context.

## *1.2 Authority and Status of the Plan*

The General Fono of Tokelau at its meeting in November 2003 reviewed and approved a set of emergency rules (see 1.3 Tokelau Emergency Rules (2003)). It also approved a proposal that a national emergency plan be prepared for consideration by the General Fono.

The Tokelau National Emergency Plan was subsequently adopted by the General Fono on 15 November 2005.

Since the development of the Tokelau National Emergency Plan it has been recommended that individual nuku response plans be written with descriptions of all Village emergency management arrangements, from either written or verbal understandings that support Tokelau's comprehensive emergency management, also known now as Disaster Risk Reduction (DRR).

Tokelau is supported in times of emergency by:

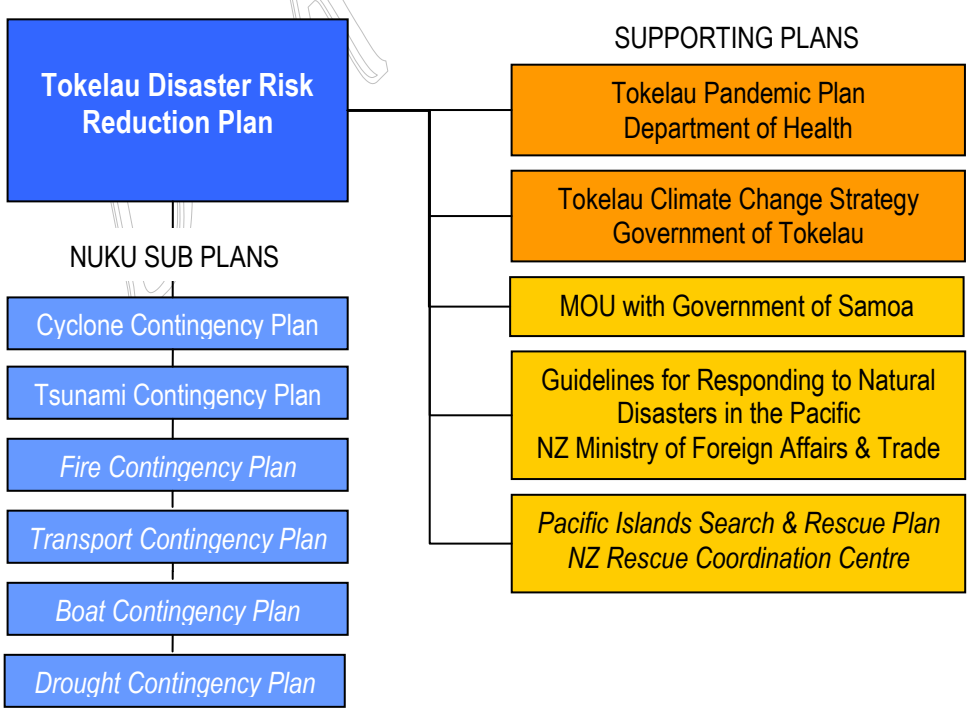
- New Zealand
    - Office of the Administrator
    - Ministry of Foreign Affairs and Trade (MFAT);
    - Ministry of Civil Defence & Emergency Management (MCDEM);

- Meteorological Service of New Zealand Limited (MetService);
- NZ Red Cross.

- Samoa
  - Samoan Meteorological Division (SMD);
  - Samoan Red Cross;
  - UNDP (Samoa);
- Pacific Region
  - Regional Specialised Meteorological Centre, Nadi, (Fiji) (RSMC Nadi/Fiji Meteorological Service);
  - UN OCHA (Fiji);
  - Pacific Tsunami Warning Centre (PTWC; Hawaii).

The Tokelau National Disaster Risk Reduction Plan has been developed from the Tokelau National Emergency Plan by Tokelau's leaders and public service officials, in consultation with the nuku communities, and New Zealand officials from Ministry of Civil Defence & Emergency Management, Ministry of Foreign Affairs and Trade and NZ Red Cross. The Plan has a number of incorporated sub plans, and is supported by other plans and documents. The Plan is to be used as a reference by Tokelau, New Zealand, and the other countries and organisations that are committed to support disaster risk reduction in Tokelau.

**Figure 1:** Relationship of the Tokelau Disaster Risk Reduction Plan to other plans (N.B. *italics* denotes plan is to be developed)



## *1.3 Tokelau Emergency Rules (2003)*

The following are the emergency rules of Tokelau.

1. The Ulu o Tokelau shall advise the outside world if Tokelau is affected by an emergency.
2. Where there is a serious threat to Tokelau, or where an emergency or sudden disaster endangers life or property on an island of Tokelau, the Faipule in consultation with the Taupulega, as is appropriate in the circumstances, may notwithstanding any other rule give such orders and take such actions [affecting persons and property] as are reasonably necessary to deal with the situation.
3. Where a Faipule has acted under Rule 2 the Faipule shall—
   (i) immediately report the circumstances and what has been done to the Taupulega;
   (ii) give public notification of the circumstances and the measures taken or to be taken.
4. Any person who fails to comply with an order of the Faipule given under Rule 2 commits an offence and shall be liable on conviction to a fine not exceeding $50.
5. No civil or criminal liability shall attach to the Faipule, or any person who acts under the orders of the Faipule, for anything done in good faith under these Rules.
6. Where the property of an individual or of a family is damaged or destroyed for the purposes of these Rules, the General Fono shall, after consulting the village concerned decide—
   (i) whether compensation should be paid; and
   (ii) the amount of any compensation.

# 2 Description of Tokelau

## *2.1 Geography of Tokelau*

Tokelau consists of three nukus: Atafu; Nukunonu; and Fakaofo. Atafu lies 92 kilometres north-west of the central nuku, Nukunonu. The most southern nuku, Fakaofo, is 64 kilometres south-east of Nukunonu. The largest nuku is Nukunonu at 4.7sq km. Fakaofo and Atafu are 4sq km and 3.5 sq km respectively. From Atafu in the north to Fakaofo in the south, Tokelau extends for less than 200km. Each nuku is made up of a string of islets (Motu) not more than a few hundred metres wide and estimated to be generally less than three to five metres above sea level. The islets and the connecting coral flats separate the Pacific Ocean from the lagoons.

For each nuku, the outer reef edge is about a hundred metres from the shoreline. The sea floor plunges steeply from the outer reef down to the abyssal plane of the Pacific Ocean which is over two kilometres deep around Tokelau.

The climate is hot with an average temperature of 28 deg C. Severe tropical storms and cyclones are closely linked to El Niño Southern Oscillation (ENSO) conditions with recent damaging events occurring in 1987, 1990, 1991 and 2005 causing extensive damage to houses and general infrastructure, due to the low-lying nature of the nukus. Rainfall averages 240 mm per year, with the highest falls in the months of December-January. Rainfall collected from roofs is now the principle source of potable water in Tokelau, although limited ground water has been accessed by dug wells. Global climate changes are a recognised threat to Tokelau's long-term viability.

Because of the low fertility of the coral-sand 'soil' on the islets of all three nukus, only a few food crops can be grown, such as breadfruit, coconut, pandanus, giant swamp taro, and banana.

The population of each nuku are concentrated in a single village for each of Atafu and Nukunonu, while Fakaofo has two villages on separate islets (Fenua Fale and Fala) just over a kilometre apart and separated by several small islets. All villages are located on islets on the western or north-western side of the nukus.

Tokelau's closest neighbour Samoa lies 480 kilometres to the south. Tokelau is relatively isolated. There are no airstrips in Tokelau – all transportation in to and out of Tokelau is by ship, as is transport between the three nukus. All travel and shipment of supplies are via Apia, Samoa. The Tokelau Apia Liaison Office (TALO) is located in Apia, including the principal Tokelau customs and border control.

The Census of Population and Dwellings in 2006 reports the usual resident population of Tokelau as 1,466 with roughly equal distribution of the population between the three nukus. Tokelau has a youthful population with a median age of 22 years. Of the usual resident population, there is a noticeable narrowing of the population structure in the 20 – 29 year olds, most likely because of their departure for reasons such as education and employment outside of Tokelau. There are almost the same number of males and females, with females having a higher life expectancy.

With limited natural resources, Tokelau has a small economic base from fishing, public sector spending, and funding from the New Zealand government. A continuing challenge for the country is achieving economic and fiscal stability in the face of a very small private sector and continued migration.

## 2.2 Maps of Tokelau

**Figure 2** Tokelau in the South West Pacific. Source: New Zealand Defence Force

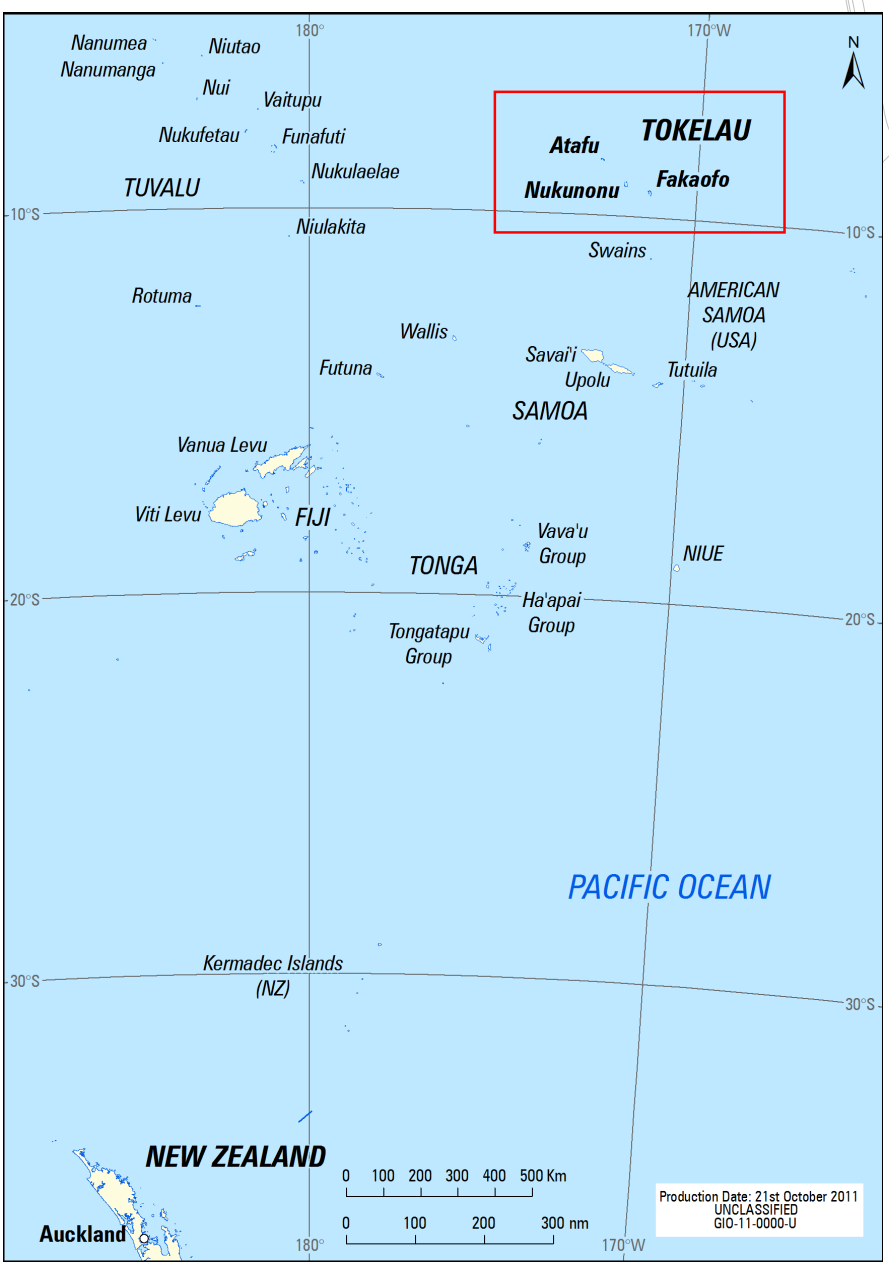


**Figure 3** Tokelau, the three Atolls (Nuku). *Source:* New Zealand Defence Force

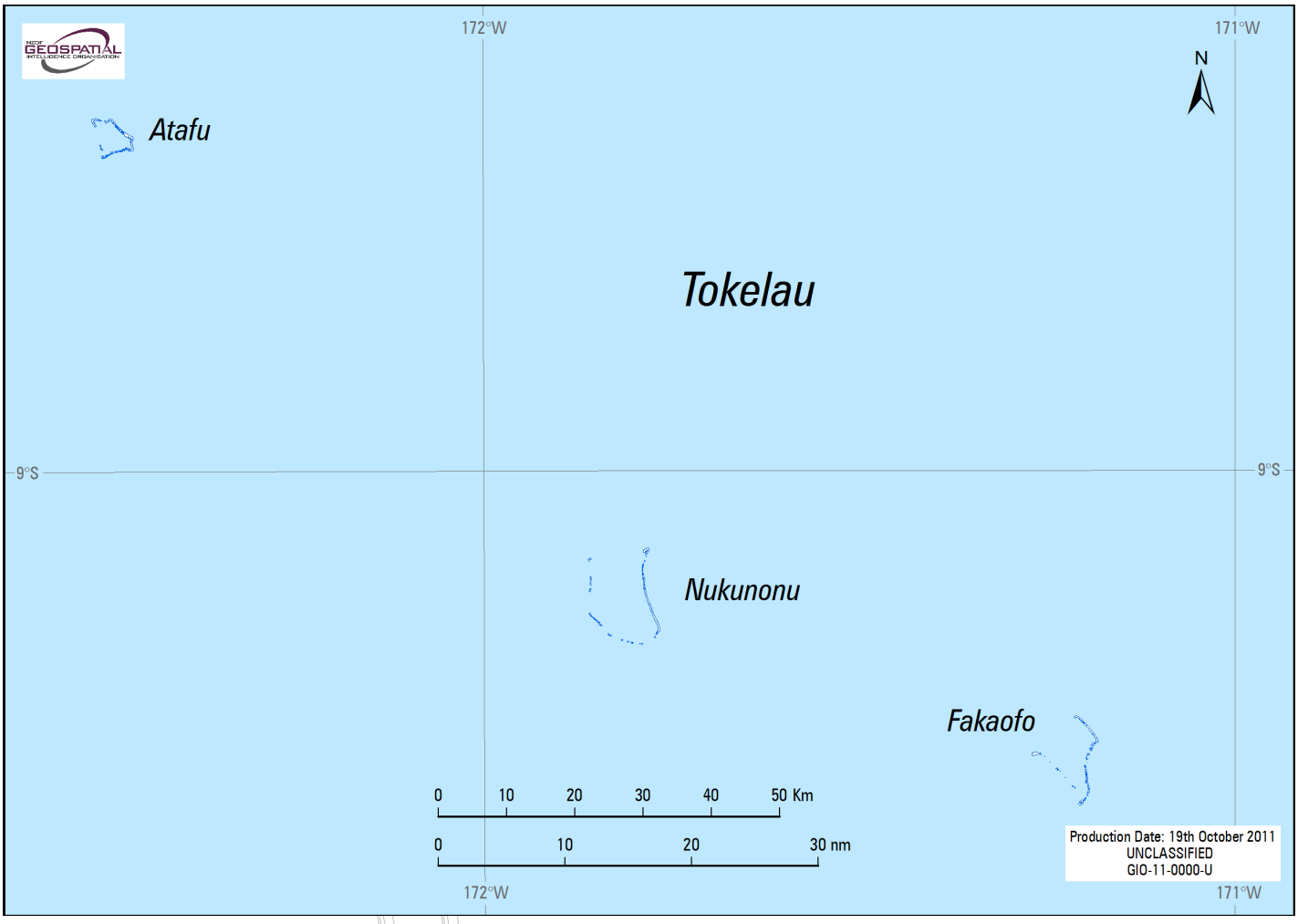


**Figure 4** Fakaofo. Source: New Zealand Defence Force

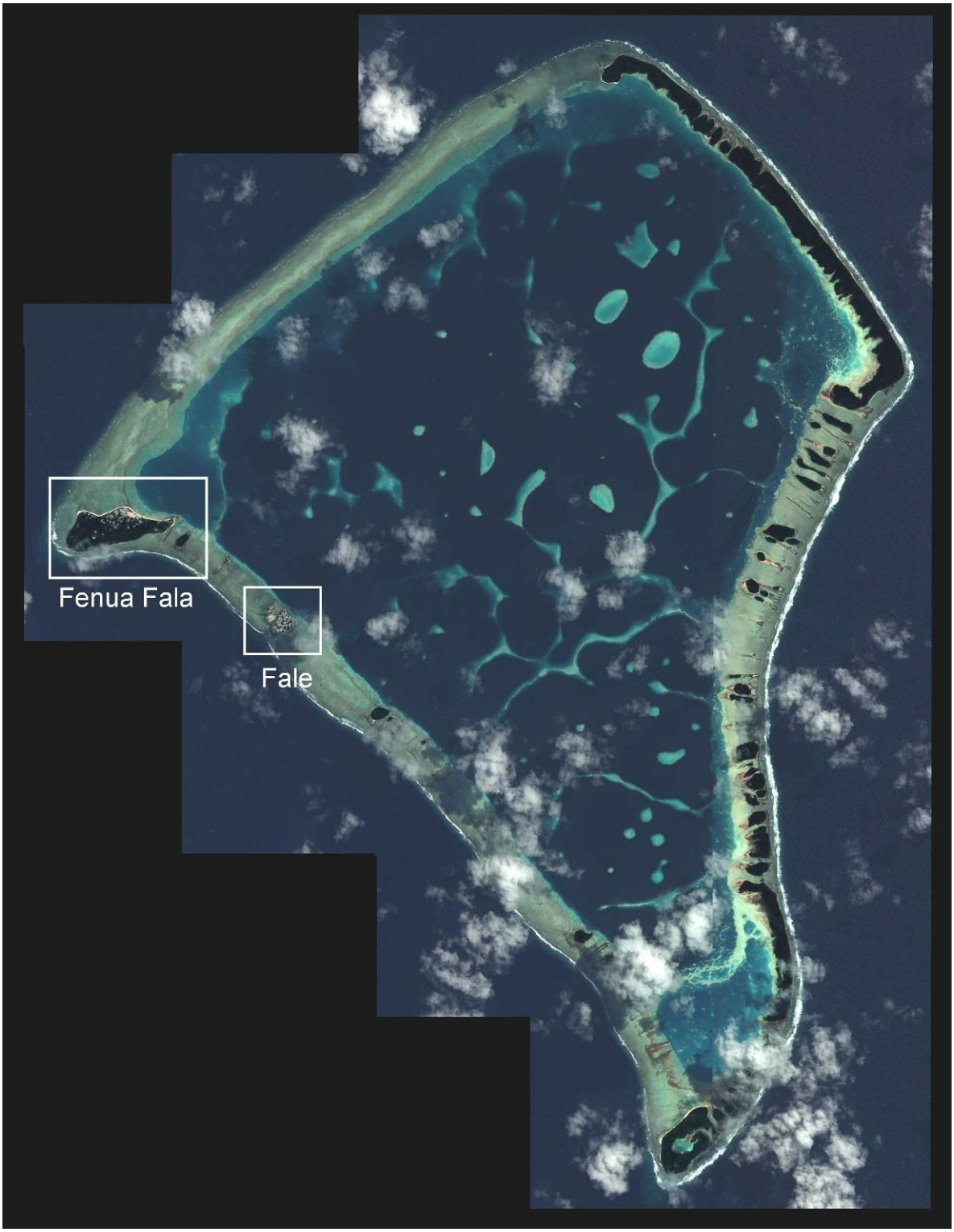


**Figure 5** Fakaofo – Fenua Fala Village. Source: New Zealand Defence Force


**Figure 6** Fakaofo – Fale Village. Source: New Zealand Defence Force

**Figure 7** Nukunonu. Source: New Zealand Defence Force

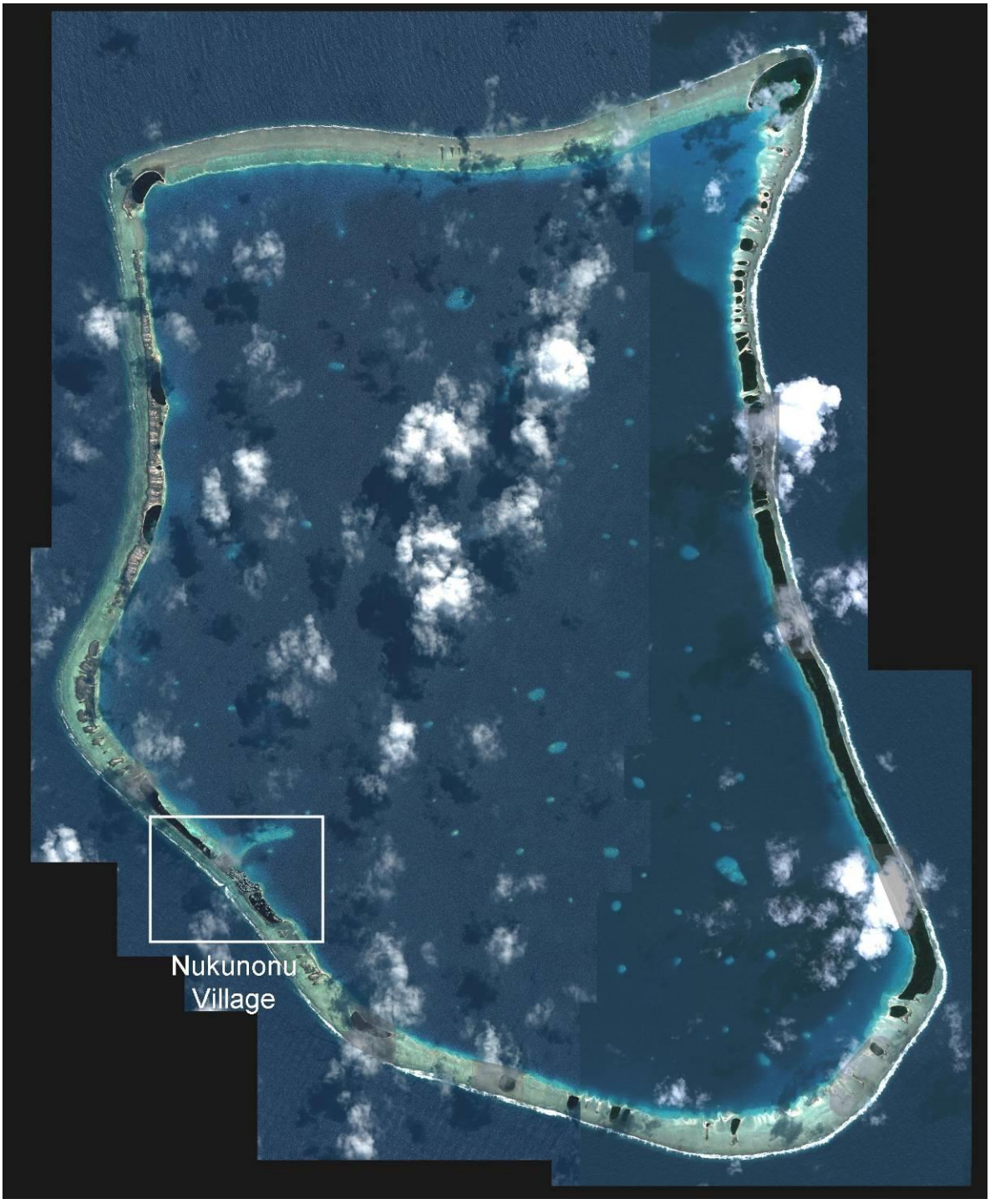


**Figure 8** Nukunonu – Nukunonu Village. Source: New Zealand Defence Force

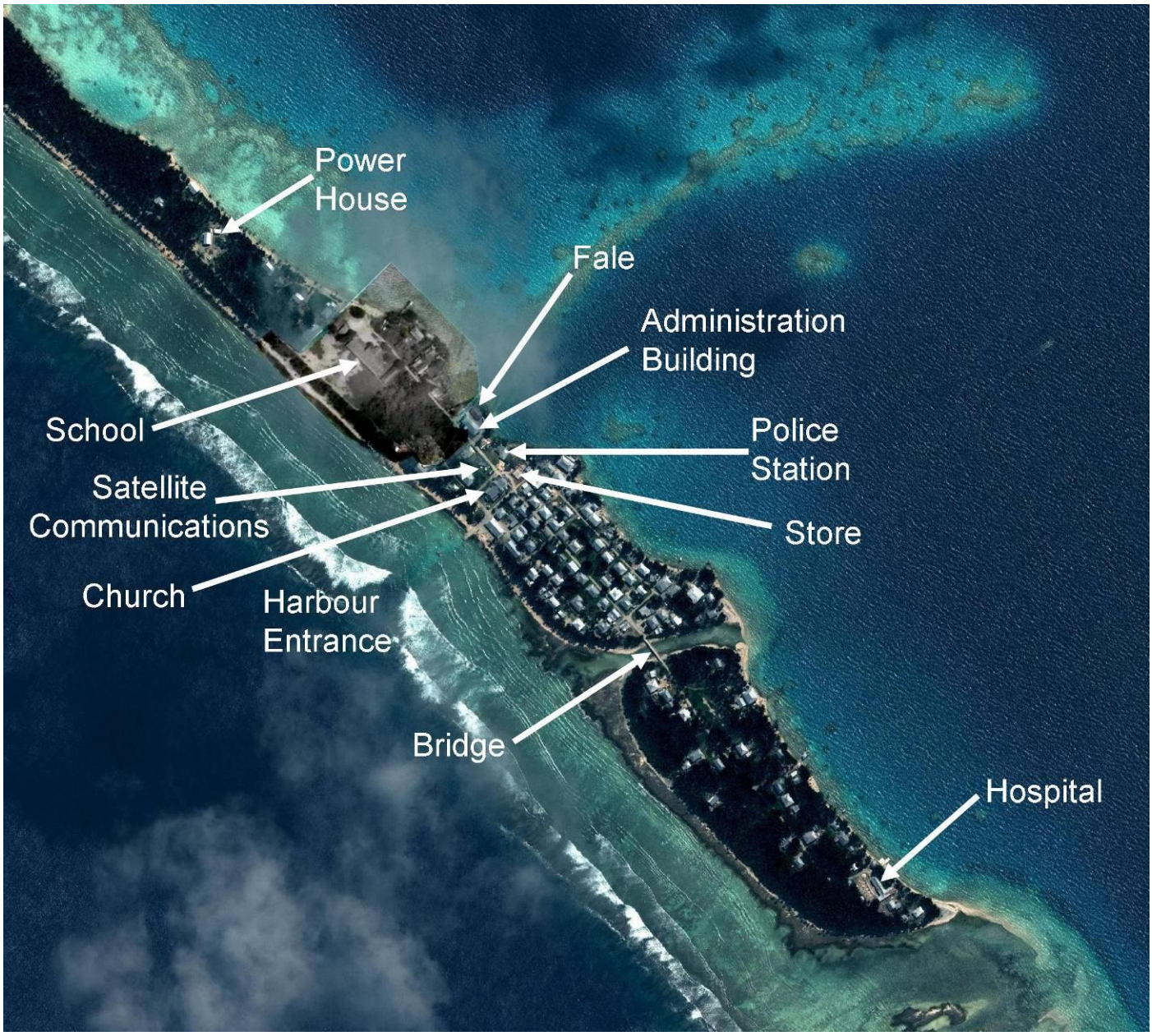


**Figure 9** Atafu. Source:  New Zealand Defence Force

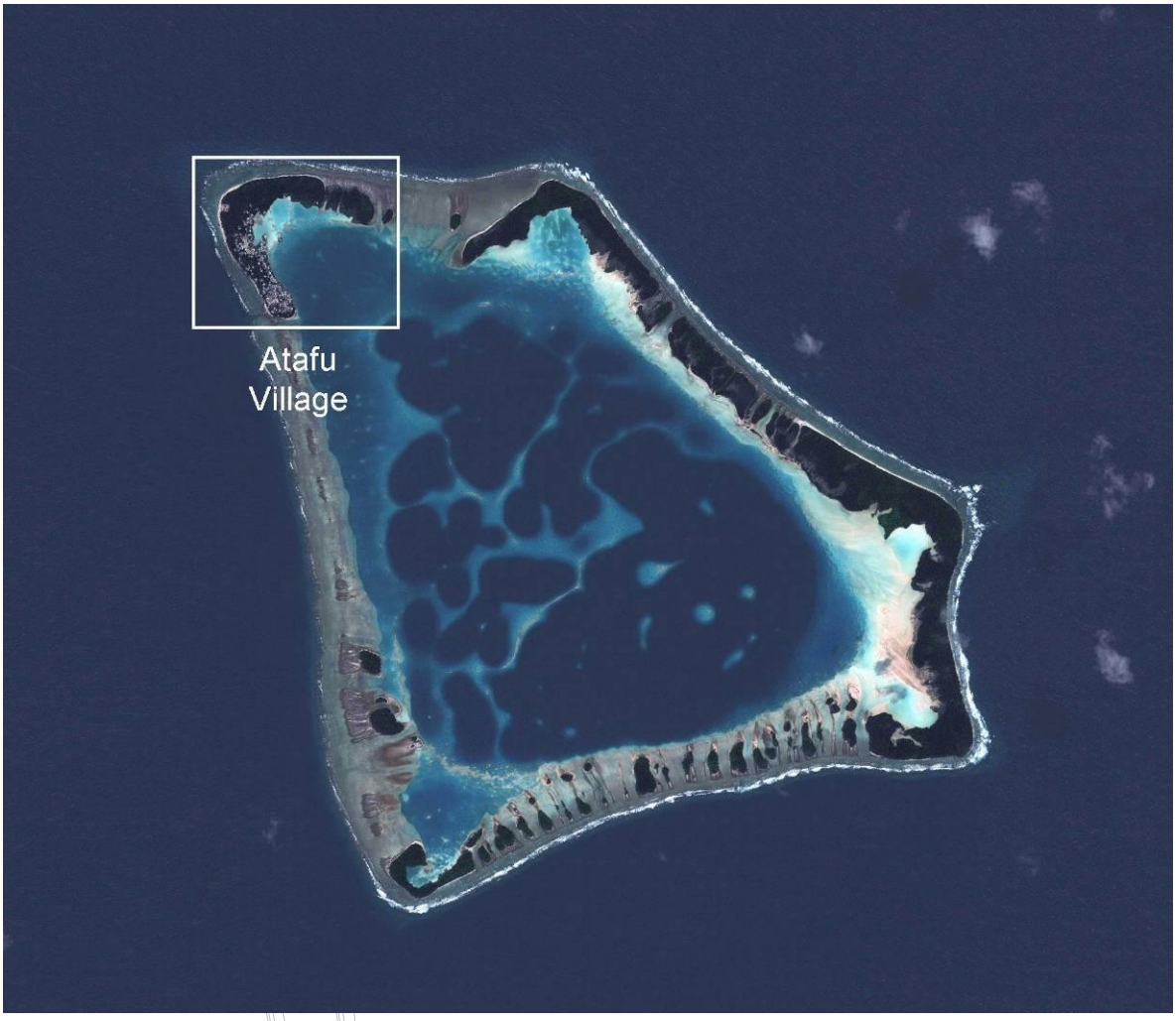


**Figure 10** Atafu – Atafu Village. Source:  New Zealand Defence Force

## 2.3 Administration arrangements

Tokelau has been a non-self governing territory of New Zealand since 1926. Over the last three decades it has moved progressively towards self-reliance. It has its own unique political institutions, including a national legislative body (General Fono) and Executive Council (Council for Ongoing Government). It runs its own judicial system and public services. It has its own shipping, power generation and telecommunications systems.

Each nuku is governed by its Taupulega (Council of Elders).

On 27 January 1994, many of the powers of the New Zealand Administrator of Tokelau, which cover administration of the executive government of Tokelau, were delegated to the General Fono. In June 2004 they were transferred to the three Taupulega, which are now in charge of many public services on their nukus.

The Tokelau Amendment Act was passed by the New Zealand Parliament in 1996 and came into force on 1 August of that year. The Act conferred on the General Fono a power to make rules for the peace, order and good governance of Tokelau. Their functions are carried out under a delegation from the three Taupulega. The General Fono's Executive Council (the Council for Ongoing Government) consists of the Faipule (elected leader of the village) and Pulenuku (Mayor equivalent and also elected) from each nuku.

## 2.4 Partnership with New Zealand for Disaster Risk Reduction

New Zealand, through the Office of the Administrator of Tokelau, is to assist Tokelau and partners maintain the Tokelau's Disaster Risk Reduction Plan in consultation with Ministry of Foreign Affairs and Trade and the Ministry of Civil Defence and Emergency Management, in compliance with clause 6.4.5 of the "Joint Statement of the Principles of Partnership between Tokelau and New Zealand" which states that New Zealand "will assist Tokelau in the event of emergencies beyond its control."

The Tokelau Disaster Risk Reduction Plan is an important document for Tokelau. It is also important for New Zealand as it will assist in ensuring that necessary assistance and support is provided to Tokelau to reduce disaster risk and to enable effective response and recovery.

# 3 Hazards, Vulnerabilities, Consequences and Risks

## *3.1 Hazards and Risks*

A hazard is the potential to impact adversely on individuals and communities, and the social, economic, cultural and environmental resources supporting them.

Risk, by contrast, is the combination of the likelihood and the consequences of a hazard. It can also be expressed as a combination of exposure to a hazard and a community's vulnerability to it; e.g. Risk = Hazard x Vulnerability.

A hazard may pose many risks such as death, injury, property damage, and include social, economic and environmental consequences.

When a hazard event impacts on people, their activities, or the built or natural environment, the consequences range from being a nuisance through to being a disaster.

A disaster generally means a serious disruption of the functioning of a community or a society and involves widespread human, material, economic or environmental losses and impacts, which exceed the ability of the affected community or society to cope using its own resources.

## *3.2 Hazards of Tokelau*

The main recognised hazards that could lead to an emergency or disaster in Tokelau are:

1) tropical cyclones and storms with associated strong winds, intense rainfall and high storm tide and wave conditions leading to wave overtopping and inundation
2) inundation due to distant storms or cyclones leading to large swell wave overtopping and inundation
3) tsunami
4) droughts
5) transport failure
6) environmental and human induced disasters including the contamination of water sources and exposure to hazardous waste, e.g. marine pollution from oil spills
7) disease, such as influenza or a pandemic, and
8) building fire, including house or houses and critical buildings such as the generator house, store shed, or telecommunications facility, all of which may contain fire accelerants that need special management.

Tokelau is considered a low risk from earthquakes and volcanic activity.

A multi-hazard context exists where Tokelau may be directly impacted by one or more hazards at the same time (for example a tropical cyclone may lead to flooding from rainfall or coastal inundation which leads to the loss of power which leads to the failure of refrigeration and the loss of food).

## 3.3 Vulnerabilities

Tokelau is highly vulnerable to natural and human induced hazards. Some of the vulnerabilities are unique to nukus, such as Tokelau, that have:

1) islets with very low relief; and are therefore close to sea level
2) islets with very limited width
3) small and closely settled populations distributed over several nukus and islets that are particularly vulnerable to coastal hazards
4) no air transport, limited sea transport and only open coast loading/unloading
5) significant reliance on imported food and other requirements such as diesel (for power generation) transported by sea from other countries
6) reliance on other countries for advanced health care that even in an emergency is a day and a half to three days away, depending on the location of the transporting ship
7) limited fresh water resources that are vulnerable to over-use and contamination
8) A small economy vulnerable to global influences
9) Fragile eco-system (for example coral reefs protect the coastline)
10) limited (but improving) application of building codes and standard practices
11) key people who are mobile and at the time of an emergency may be away from their Tokelau village, on another islet or nuku, in Samoa, in New Zealand, or in some other country

## 3.4 Consequences

Possible consequences arising from the hazards and vulnerabilities of Tokelau include:

1) loss of life and/or injury
2) loss or damage to homes
3) loss or damage to critical facilities and functions, e.g. hospitals, schools, nuku administration offices, or meeting places
4) loss or damage to infrastructure, e.g. power supply systems, telecommunication systems
5) loss of stored food and other essential supplies
6) loss of animals and cultivated crops
7) loss or degradation of water supplies
8) disease
9) loss or damage to equipment
10) loss or damage to transport (shipping) between Samoa and the three nukus
11) financial loss

12) psycho-social impacts

It is of critical importance to continue to recognise and reduce risk wherever possible, including by development and maintenance of emergency management arrangements, and recording these in this Plan.

# 4 Emergency Management

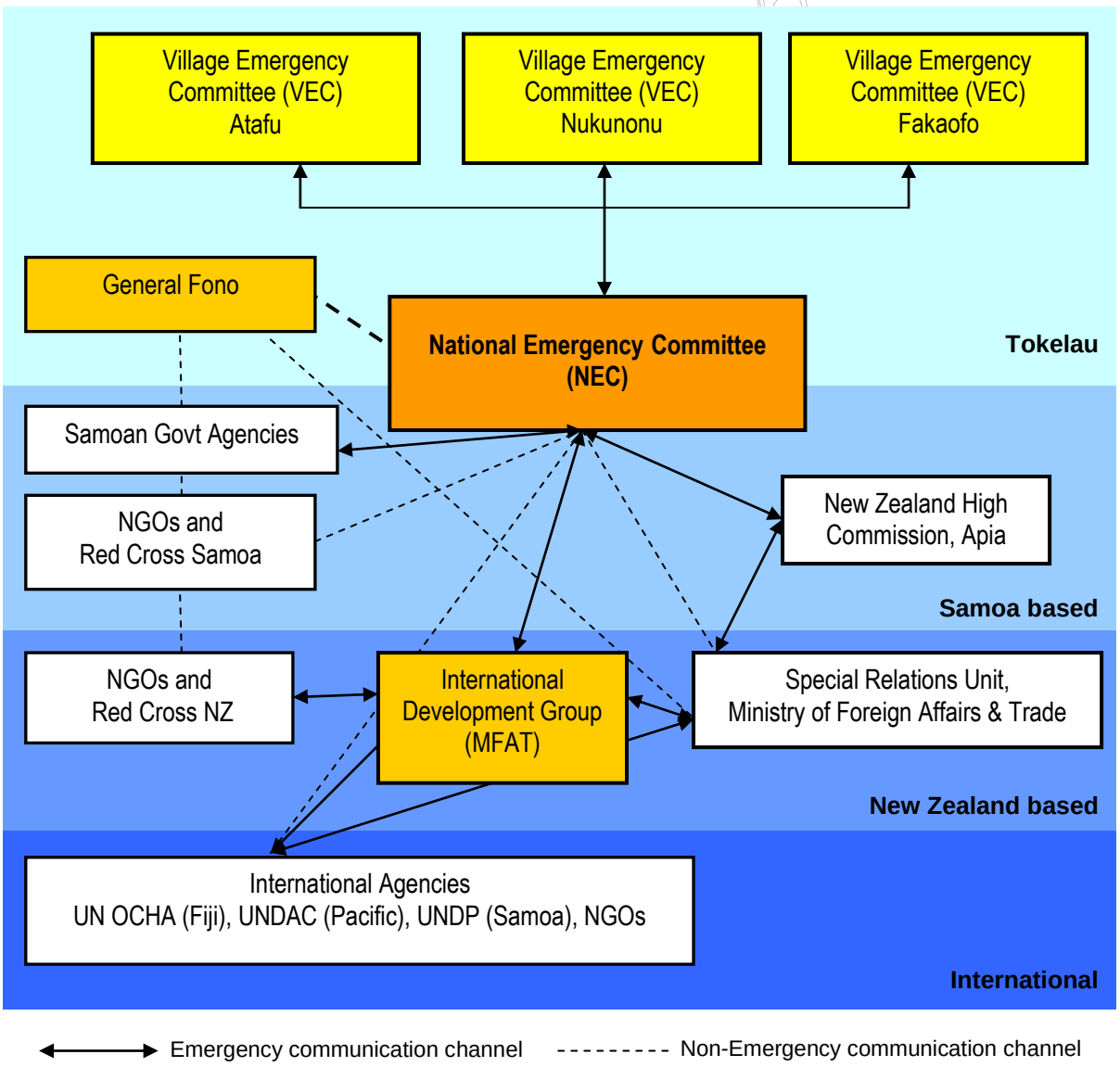
## *4.1 Emergency Management Structure*

Emergency management for Tokelau includes arrangements at the nuku (village), national, region, and international level.

Tokelau has a National Emergency Committee (NEC) and Village Emergency Committees (VECs) with the roles, responsibilities and arrangements necessary to meet the hazards and risks of Tokelau.

Disaster risk reduction support arrangements are provided by New Zealand and by regional and international agencies as shown in Figure 5.

**Figure 5** Emergency Management Structure for Tokelau



## 4.2 National Emergency Committee (NEC)

*Membership*
The four key positions named on the NEC are:

- NEC Chairman: Ulu o Tokelau;
- NEC Coordinator: General Manager (Office of the Ongoing Government of Tokelau), Tokelau Apia Liaison Office, Apia, Samoa;
- Deputy NEC Coordinator: Director of Transport and Support Services, Tokelau Apia Liaison Office, Apia, Samoa.
- Deputy NEC Coordinator: Director of Health, Tokelau Apia Liaison Office, Apia, Samoa.

The NEC also includes senior public servants based in Apia and a representative from the New Zealand High Commission in Apia. The membership is summarised below.

**Table 1** NEC membership

| *Name* | *Role* |
|---|---|
| Ulu o Tokelau | Chair |
| General Manager<br>(Office of the Ongoing Government of Tokelau) | Advisor/Coordinator |
| Director, Transport & Support Services | Advisor/Deputy Coordinator |
| Director, Health | Advisor/Deputy Coordinator |
| General Manager, Finance | Advisor |
| Manager, Operations (Transport & Support Services) | Advisor |
| Manager, Stores & Supplies | Advisor |
| NZ High Commission, Apia representative | Advisor |
| *UNDP Response Coordinator* | *Advisor* |
| *Samoan Red Cross* | *Advisor* |
| *Samoan Meteorological Division* | *Advisor* |

*Purpose*
The NEC coordinates national emergency management plans, including disaster risk reduction, readiness, response, and recovery activities.

The NEC is the central point of contact in any emergency affecting Tokelau and has the responsibility of collecting all information relating to the damage, loss, and requests for assistance that arise.

The NEC coordinates the use of the national resources available for responding to needs arising from the emergency.

The NEC is responsible for reporting back to the New Zealand government and to other regional and international stakeholders about the emergency, and any assistance required dealing with the emergency in Tokelau.

The NEC is accountable to the General Fono.

In the event of an emergency event or a situation developing which could impact one or more of the Tokelau communities a meeting of the members of the NEC based in Apia will be convened.

If time permits the NEC will consult with the Council for the Ongoing Government of Tokelau on the requirements of the village(s) prior to any requests for emergency supplies or resources being forwarded to New Zealand or other countries/organisations.

## *4.3 Director of Transport (Responsible for Disaster Management)*

The Director of Transport based in Apia is responsible for emergency preparedness in Tokelau including public education programmes. It is the role of the Director of Transport to operationalise, monitor, evaluate, update and maintain the Plan, in consultation with officials in New Zealand. In a national emergency, the Director of Transport assists in coordinating response, relief and recovery activities.

## *4.4 Village Emergency Committee (VEC)*

*Membership*
The Faipule on each nuku is appointed the VEC chairperson, and the General Manager or equivalent the VEC coordinator. The membership of the VEC is to be maintained and provided to the Tokelau Apia Liaison Office.

*Purpose*
The Committee is responsible for Reduction, Readiness, Response, and Recovery on their nuku. Each VEC has an important role to play in how their Village reacts to a disaster and how the best use of resources is made at that time. The VEC ensures it is an effective central point of contact in an emergency and that it is proactive in collecting and sharing information.

*Reduction*
**See 5.2 Risk Reduction Responsibilities**

*Readiness*
**See 6.3 Readiness Responsibilities**

*Response*
General VEC responsibilities for the response include:

- Activating village response processes;
- Assessing immediate needs;
- Maintaining communications with the NEC;

- Undertaking initial damage assessments;
- Co-ordinating nuku relief operations

**See 7.6 Response Responsibilities**

*Recovery*
Planning for recovery should start as soon as practical and preferably during the response phase.

The VEC will manage all aspects of Recovery on its nuku and ensure that the NEC is kept informed of progress.

**See 8.1 Recovery Responsibilities**

## *4.5 National Levels of Emergency*

The national and village response can be at different levels to meet the size of the event. It is the responsibility of the NEC and the VEC to determine the number of personnel and resources required for each level.

If international assistance is required, the Ulu O Tokelau declares a State of Emergency, after consultation with the Administrator

The levels are:

1) **Monitoring**
   *e.g. cyclone forecast to pass around Tokelau; or a World Health Organisation Pandemic alert.*

   Required when there is a warning of a potential threat that may impact Tokelau. May only require one or two people to perform the monitoring function on behalf of the NEC and VEC.

2) **An Emergency Incident on one nuku**
   *e.g. house fire, missing child, missing boat.*

   May require support from Tokelau Apia Liaison Office and an incident report to the NEC which will then determine the required response to ensure necessary actions are taken.

3) **Emergency Response on one or more of the three nuku**
   *e.g. influenza on one or more nuku, tropical Cyclone impacting Tokelau, failure of a food/fuel supply delivery.*

   NEC and VECs are activated; Response Plan is followed, including informing New Zealand.

4) **Emergency in the South Pacific Region including Tokelau**
   *e.g. an event such as a tropical cyclone or pandemic that threatens the three nuku and Samoa.*

   NEC and VECs are activated; Response arrangements are followed, including informing New Zealand. The Tokelau Apia Liaison Office and other agencies in Apia may be impacted and the support to Tokelau from Apia compromised. Resources from New Zealand and other partners may be mobilised.

# 5 Risk Reduction

## *5.1 Risks and Risk Management*

The people of Tokelau have for many centuries lived with most of the identified hazards and vulnerabilities and have evolved arrangements to reduce or mitigate the associated risks. These include:

- governance arrangements for each village where there is always someone responsible – the eldest member of the Taupulega,
- tropical cyclone response arrangements that have fisherman returning to shore, the securing of boats and buildings against wind and storm surge, storing food, sheltering in "safe houses", and
- telecommunications arrangements to receive warnings and send reports on the situation and on impact damage.

However, while population numbers at risk are small, there are proportionally limited emergency services and emergency infrastructure to assist in times of disaster.

The Tokelau lifestyle is unique and has evolved over centuries in a fundamentally sustainable form. However, there are new risks as lifestyles change with new practices adopted from other countries, such as showers, and washing machines for both clothes and for dishes that are increasing the consumption of water, electricity and consequently fuel.

Tokelau's risk profile is therefore a function of its fragile island environment, the traditional resilient lifestyle, combined with some negative impacts of new lifestyle developments, climate change, and the reduction or loss of traditional knowledge and practices (e.g. sailing canoes).

Some risks are increasing, such as:

- increasing dependency on imported foods, medicines, fuels (diesel, petrol, LPG), and other goods;
- anthropogenic climate change and sea level rise.

## *5.2 Risk Reduction Responsibilities*

Many risks have been recognised and reduced, such as:

- sand mining in front of villages discontinued, to reduce coastal erosion;
- new houses are being built safer, to higher standards, to better withstand tropical cyclone and storm surge;
- improvement of concrete mixing (cements, aggregates), to increase concrete strength;
- new houses are being built higher above ground level, to reduce inundation during cyclone-related wave overtopping;
- new houses incorporate water reservoirs with greater capacities, to reduce water shortages (but water levels need to be monitored to be alert for water usage exceeding rainfall supply);
- active public health programmes, to reduce health risks.

Some identified risks may require research to find effective risk treatments. For example the risk of coastal erosion is not always best treated by seawalls. However where sea walls have been built they need occasional maintenance to remain effective.

It is recommended that each VEC develop and maintain a risk register, a list of identified risks, to be reviewed on a regular basis and from which the priorities for risk reduction actions, risk treatments, can be set.

The Disaster Risk Reduction actions for each village are summarised here. Each VEC is responsible for:

- the security and protection of food and water supplies so that there are reserves for use during an emergency;
- ensuring individual homes and nuku have sufficient water catchment. Roofs have guttering, downpipes are connected to tanks, and tanks are water-proofed and leak proof;
- the security and protection of boats, essential equipment, and supplies from strong wind and storm surge;
- the identification and maintenance of “safe houses” (buildings) and ensuring that people are aware of their location and status;
- supporting the maintenance of the village hospital and health facilities for use during emergency;
- ensuring effective communication systems available to the village including maintenance (battery charging) and testing of satellite phone(s);
- ensuring ongoing public education on disaster risk reduction for adults and for children (coordinated with the Director of Transport and the Director of Education).

## *5.3 Public Education and Awareness*

The need for the people on the three nukus to fully understand the hazards and be prepared for emergency events is very important. The ability to promote self help and personal preparedness within the three nuku may be limited but the role of educating and maintaining a high level of awareness should be seen as key to reducing risk to people and property and minimising the impact of emergencies.

The Public Education and Awareness programme is the responsibility of the Director of Transport, supported by the NEC. The principle focus is on each of the nuku and their schools.

Over the period of this Plan the emphasis will be on:

- Readiness for an emergency event, e.g. cyclone
- What to do during and how to recover from a cyclone.
- Lifesaving first aid
- Safe houses
- Safety on small boats at sea
- Warning systems and how to respond

- Health and pandemics
- Communicating information
- Conserving water

# 6 Readiness Arrangements

## 6.1 Readiness Principles

Readiness arrangement principles include:

- Being ready for any emergency at any time
- Maintaining readiness and response arrangements, including warning systems and alternative communications such as sat phones.

At the beginning of the tropical cyclone season additional arrangements include checking the security of buildings, particularly safe houses, and removing or disposing of loose materials.

During dry seasons check roofs, guttering, connect downpipes to water tanks, and check the integrity of the water tanks, ensuring they are clean and leak proof.

## 6.2 Warning Systems

Tokelau has several arrangements for receiving warnings of possible hazard events.

***Severe Weather Warnings***
Warnings of adverse weather that may affect Tokelau are sent by email/fax directly to the Tokelau Apia Liaison Office (and can be seen via the internet) from:

1) the Samoa Meteorology Division (SMD)
   www.mnre.gov.ws/meteorology/forecast.htm

2) the Regional Specialised Meteorological Centre, Nadi, Fiji Meteorological Service
   www.met.gov.fj/advisories.html
   www.met.gov.fj/aifs_prods/10050.txt

These are backed up by:

3) Regional Specialised Meteorological Centre, Wellington, MetService NZ Ltd

And for Tropical Cyclones further backed up by:

4) Tropical Cyclone Warning Centre, Brisbane, Bureau of Meteorology, Australia and

5) National Weather Service Honolulu, from its high seas forecast
   www.prh.noaa.gov/data/HFO/HSFSP

***Tsunami Warnings***
Warnings of a potential tsunami are sent directly to the General Manager of the Office of the Ongoing Government of Tokelau and the Director of Transport and Support Services, Tokelau Apia Liaison Office by fax and email from the Pacific Tsunami Warning Centre (PTWC) in Hawaii.

***Public Radio Broadcasts***
During tropical cyclone and tsunami alerts, Tokelau receives ongoing weather or tsunami reports every ½hour or 1 hour from Samoa Meteorology Division through Radio 2AP.

***Warning backups***
Phone calls are made to the General Manager of the Office of the Ongoing Government of Tokelau, Tokelau Apia Liaison Office by MFAT following receipt in New Zealand of cyclone or tsunami warnings, to help ensure that the warnings have been received.

***Warning the Nuku***
In the event of a severe weather warning or tsunami warning, the General Manager or Director of Transport and Support Services, Tokelau Apia Liaison Office will immediately contact village General Managers and the Master of the MV Tokelau.

They then advise the Ulu O Tokelau and the NEC is activated.

The village General Managers activate the VEC and warn their village using village warning arrangements, such as hand operated sirens, horns or runners.

## *6.3 Readiness Responsibilities*

Standard readiness arrangements for each nuku are the responsibility of the VEC and address actions such as:

- checking that sufficient food and water supplies are available on the nuku for the likely duration of expected threats such as cyclone;
- maintaining the security and protection arrangements for boats, essential equipment, and supplies in case of strong wind and storm surge;
- maintaining hospitals in a state of preparedness to receive and treat people;
- observing and reporting on weather conditions;
- testing all forms of communications on a regular basis, including satellite phones, and ensuring that all batteries are kept charged;
- ensuring that village warning systems are in place and that they participate in tests of national warning systems;
- maintaining safe houses and ensuring that people are aware of the location of safe houses;
- maintaining public education and advocacy, including training and exercises, coordinated with the Director of transport;
- supporting individual preparedness e.g. clean-up and securing material prior to cyclone season;
- Monitoring water levels of house and communal water tanks
- reporting routinely on the state of readiness, to the Village and to the NEC.

# 7 Response Arrangements

## *7.1 Response Principles*

When pre-event warnings are received, e.g. of a tropical cyclone from the Regional Specialised Meteorological Centre in Nadi (RSMC Nadi/Fiji Meteorological Service), Samoa Meteorological Service Division (SMD), the MetService NZ Ltd, or from Ministry of Foreign Affairs and Trade or of a possible tsunami from the Pacific Tsunami Warning Centre in Hawaii - PTWC); the Tokelau Apia Liaison Office General Manager and/or the Director of Transport contacts the nukus to inform the Ulu and the Master of the MV Tokelau.

For an emergency event where no warning is received the following actions should be taken:

1) The Faipule/Pulenuku activates local VEC plans.
2) The General Manager or the Director of Transport activates the NEC.

## *7.2 Coordination*

National coordination is the responsibility of the NEC. It will receive damage reports, impact assessments and information gathered by each nuku on their ability to manage their own response and recovery and be responsible for liaison with New Zealand.

Coordination on a nuku is the responsibility of the VEC.

The purpose of both the NEC and the VEC is to:

- **Observe** – by scanning the environment and gathering information to support a common impact picture of the emergency;
- **Orientate** – by collating the information to understand the impact and possible development of the emergency;
- **Decide** – by considering options, then develop action plans by setting priorities and allocating tasks;
- **Action** – the allocated tasks.

This process is to be repeated as the actions change the situation, and require further observation and orientation (known as the OODA loop).

Given the significant physical separation between the villages of Tokelau, the Tokelau Apia Liaison Office, and supporting agencies in New Zealand, effective and reliable communications are crucial to Tokelau for emergency management. There are a number of communications systems available to link the three nukus with the Tokelau Apia Liaison Office and to New Zealand. These include telephone, email, satellite phone, radio, and internet services such as Pacific Disaster net (www.pacificdisaster.net).

The NEC will maintain direct communication links with supporting organisations including Ministry of Foreign Affairs and Trade, which will provide communication support to ensure that all warnings are received by the Tokelau Apia Liaison Office, including ongoing weather advice.

## 7.3 Thresholds for Response

Thresholds for response for all hazards, especially cyclone and tsunami, need to be stated in each nuku response plan to ensure responses are efficient and any evacuations are not undertaken unnecessarily. Local discussions around when and how to respond to a particular event may vary on each nuku. As long as the warning is received from the Tokelau Apia Liaison Office the nuku can undertake their own, pre-determined, response actions.

## 7.4 Operations Centres

Emergency Operations Centres (EOCs) exist on each nuku. They are in a selected building on each nuku where the VEC will operate from during an emergency.

## 7.5 Safe Houses

On each nuku a number of homes or buildings have been designated as safe houses. These are to be used as places of refuge when other houses and buildings are thought risky to occupy during an emergency.

Safe houses are generally inland, situated on the lagoon side, located on higher ground and of solid construction. An education programme through schools helps people know which buildings are designated as safe houses. In the event of an approaching cyclone people are advised to move to these houses.

Evacuees need to be aware that when moving to a safe house that they should be self sufficient i.e. provide their own clothes, food and water for at least one day. Early communication by the VEC of which safe houses to use will be given.

## 7.6 Response Responsibilities

General VEC responsibilities for the response include:

- Activating village response processes;
- Assessing immediate needs;
- Maintaining communications with the NEC via the Tokelau Apia Liaison Office, including supplying regular situation reports;
- Undertaking disaster impact assessments (damage and loss);
- Co-ordinating nuku relief operations.

Regular communications with the Tokelau Apia Liaison Office uses whatever form of communication is available during the response. (Each VEC has a dedicated satellite phone for direct communication with the NEC and the other two nukus, as well as VHF and HF radio).

Each Village General Manager, or equivalent, must provide regular updates to the NEC on the situation, on behalf of the VEC. This information should include impact assessment, and the identification of essential supplies and assistance needed.

## 7.7 Reporting – Situation Reports

The NEC is responsible for providing situation reports to MFAT and the international community.

Situation reports (Sitreps) enable a common operating picture to be shared among those affected by the emergency and those involved with any response. Sitreps provide the basis for decision making and assist with the preparation of public information and media releases. They need to be factual and should become official emergency impact summaries at a specific point of time, focussing on:

- **Event or emergency status** (summary of the nature and history of the emergency event);
- **Response**: The response management structures which have been activated, risks identified, and options for recovery planning;
- **People**: The number and locations of displaced, missing, injured or dead people, their immediate needs and what actions are being taken, any search and rescue needs;
- **Infrastructure**: The impact on critical infrastructure e.g. power, communications and health services;
- **Housing**: Number of homes damaged or destroyed and what alternatives are available;
- **Food, water, and fuel**
- **Environmental:** The extent of damage to the environment and any actions taken or planned.

**See 14 Situation Report Form** for a Situation Report template.

## 7.8 Requests for Assistance

If external assistance is required, each nuku will assess their requirements for outside assistance and pass these on to the NEC through the Tokelau Apia Liaison Office. The Tokelau Apia Liaison Office is responsible for sourcing any requirements internationally.

## 7.9 International Relief

Following a disaster, the provision of relief will be based on assessed needs as reported by Tokelau, the New Zealand High Commission in Apia, and other assessment agencies. Relief will be coordinated as necessary with other governments and agencies. Where appropriate, support may be sought from relevant international organisations.

Should international assistance be required, the NEC needs to make an official request for assistance. The NEC coordinates immediate relief assistance which is likely to come from New Zealand. For example, if damage needs to be assessed, a photographic reconnaissance flight may be required. This needs to be requested by the NEC to Ministry of Foreign Affairs and Trade.

NEC coordinates full assessment and reporting to New Zealand which needs to cover:

1) Initial assessment of damage
2) Actions taken to date
3) Identify priorities – casualties, food, medicine, shelter
4) Request for assistance
5) Any search and rescue requirements.

Relief may include supplies, equipment and technical assistance.

It is possible that the UNDP, UNOCHA and the Red Cross could assist in disaster assessment surveys.

The Special Relations Unit, Ministry of Foreign Affairs and Trade with the Emergency Task Force will manage the New Zealand response. Any relief response will be based on needs assessments. Applications should contain a full analysis of damage and estimated costs.

## *7.10 Logging and recording of information and actions*

During any emergency event significant information will be produced. It is essential that this is recorded, prioritised and monitored in some form of a log. The log, which becomes the authoritative document and record, will also be useful for reviewing the response with the aim of improving procedures and processes in future events.

## *7.11 Public Information Management*

Providing clear and simple information to the people of each nuku is essential. This should be done in conjunction with the NEC so that there is clear and consistent key messaging.

Information will be communicated to the people on each nuku by the most appropriate means.

This may include:

- Public meetings;
- Printed handouts/flyers;
- Public address systems;
- Telephone;
- Runners
- Radio.

The NEC is responsible for the release of Public Information to Samoa, New Zealand, and the world with two key purposes:

1) to inform Tokelauans out of country;
2) to inform support agencies.

## *7.12 Stand-down*

The NEC is responsible for assessing incoming information to decide if the threat no longer exists for Tokelau. The formal notification of no further threat should be passed on to the specific nuku(s) and they can make the decision to undertake their own, pre-determined, stand-down actions. These actions should be documented in the individual nuku response plans.

# 8 Recovery and Reconstruction

Recovery needs to start as soon as possible in any response and is aimed at 'building back better' and re-establishing the quality of life as soon as possible.

## *8.1 Recovery Responsibilities*

For each nuku the VEC manages all aspects of Recovery and ensures that the NEC is kept informed of progress.

General VEC responsibilities for recovery include:

- Assessing the needs of the village and the nuku;
- Co-ordinating the resources available and those brought in;
- Co-ordinating the rehabilitation and restoration of the village community;
- Strengthening existing and introducing and managing new measures to reduce hazards and risks.

## *8.2 Process for Recovery*

The VEC of each affected nuku should fill in a recovery report form as soon as possible after the impacts are known. This report should be based on the template. **See 15 Recovery Report Form** This report is sent to the NEC.

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# 9 Exercising and Monitoring and Evaluation

Testing the emergency response arrangements of each VEC, the NEC, as well as the support arrangements in Apia and New Zealand is vital for the success of any emergency planning for Tokelau.

## *9.1 Exercise programme*

Exercises assist in identifying gaps and issues. Plans and procedures can then be updated with the lessons learned and the operational capability and capacity of Tokelau can be assessed, and improved.

The proposed exercising and testing of the emergency arrangements, once adopted by the General Fono, follows a 4-year cycle.

**Year 1:** The implementation of a training programme for each of the three nuku including a table top exercise to test and review the arrangements, acknowledging that hazards, levels of vulnerability and risks across the three nuku are similar. While there are specific issues relevant to each nuku, the training and exercise can follow a similar structure.

**Year 2:** A National Tokelau exercise involving the three nuku and the Tokelau Apia Liaison Office. This will involve the establishment of Emergency Operating Centres, testing communication links and the processes used for managing requests.

**Year 3:** An expanded national exercise involving selected international partners including Samoa and New Zealand.

**Year 4:** A review of all plans and the updating of documentation before deciding on the next cycle of training and exercises.

## *9.2 Monitoring and Evaluation*

This plan should be reviewed regularly at five yearly intervals. Additionally, monitoring and evaluation of the arrangements contained in this plan should occur after reviewing exercises, testing of arrangements, and following actual events

# 10 Financial

In line with international best practice, the responsibility for the safety, security and wellbeing of populations rests with governments. The responsibility for Disaster Risk Reduction budgeting primarily rests with the Government of Tokelau. Tokelau Public Service Directors and General Managers are therefore responsible for including the costs of Disaster Risk Reduction into their departmental or village budgets and assisting with Disaster Risk Reduction within their area of responsibility.

New Zealand provides Tokelau with the majority of its recurrent government budget and expects that Tokelau will look firstly to its own resources for Disaster Risk Reduction. However New Zealand stands ready in the case where Disaster Risk Reduction, especially in a disaster response, is beyond Tokelau's capacity and capability to manage.

Ministry of Foreign Affairs and Trade's involvement in responding to disasters in Tokelau may be through either the direct provision of relief, a coordinating role for New Zealand's response, or both.

United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and the Red Cross can also assist with capacity building and coordination of funding and supplies in the event of a disaster.

UNDP, SOPAC and the International Strategy for Disaster Reduction can offer technical support.

All agencies supporting Tokelau Disaster Risk Reduction do so at their own expense.

# 11 Contingency Plans

The following are overarching Contingency Plans for Tokelau that have been, or are being developed. See individual nuku response plans for specific details for each nuku.

- Cyclone
- Tsunami
- Fire
- Transport
- Boat Safety
- Search and Rescue
- Drought

## *11.1 Cyclone Contingency Plan*

### 11.1.1 Purpose

The aim of the Cyclone Contingency Plan is to allow each nuku to be prepared for a threat of cyclone and to be able to deal with the effects.

### 11.1.2 Warning Arrangements

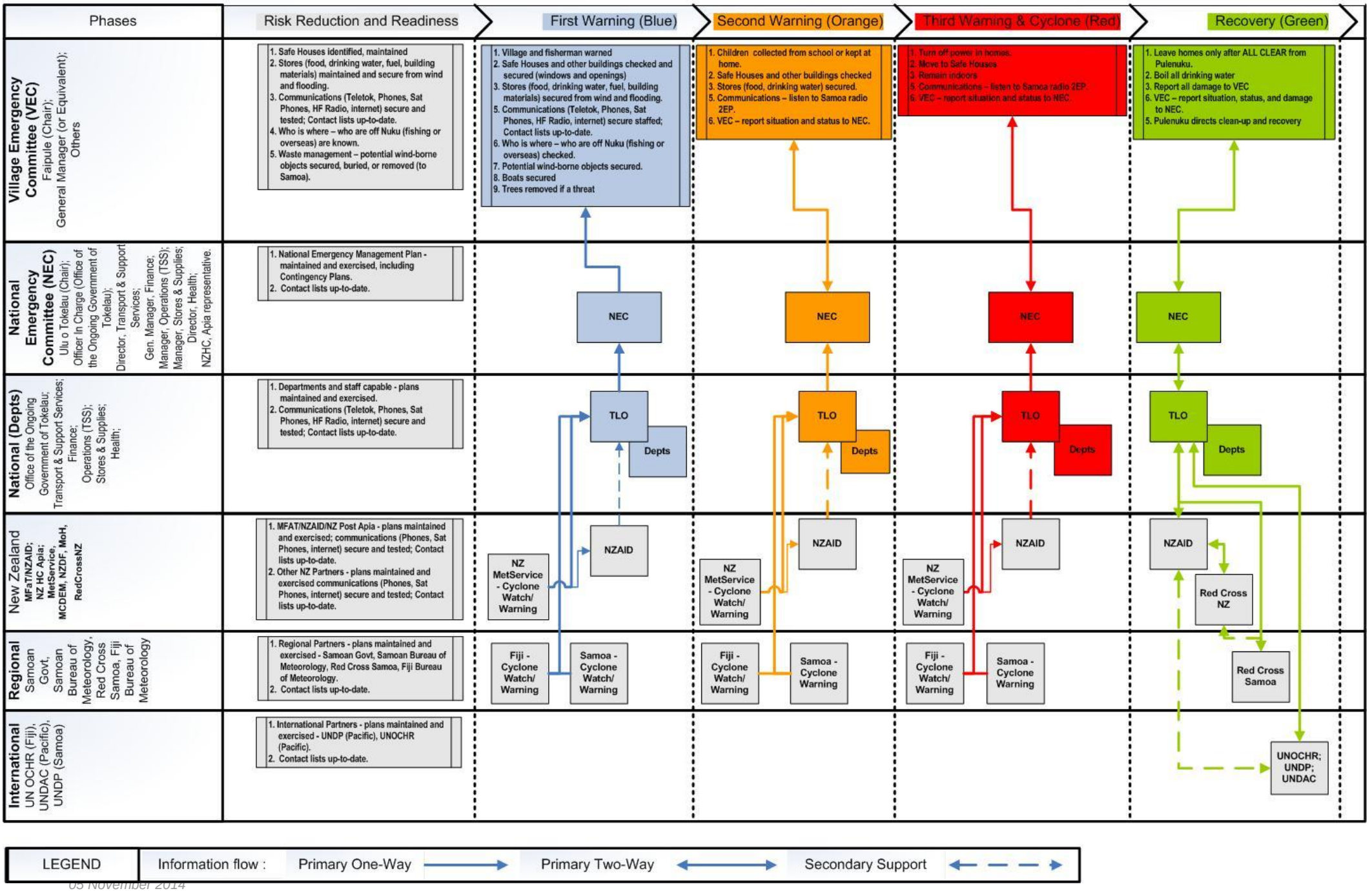
The Office of the Taupulega will receive warning of a cyclone threat from either the Tokelau Apia Liaison Office or weather forecast agency.

The Office of the Taupulega will alert the village of a pending Cyclone.

Warnings will be issued in three response phases that build on the ongoing risk reduction and readiness phase:

| | |
|---|---|
| Phase 1 | First Warning (**Blue** Alert) |
| Phase 2 | Second Warning (**Orange** Alert) |
| Phase 3 | Final Warning (**Red** Alert) |

# Tokelau Cyclone Management



## *11.2 Tsunami Contingency Plan*

### 11.2.1 Purpose

The aim of the Tsunami Contingency Plan is to allow each nuku to understand and be prepared for a threat of tsunami and to be able to deal with the effects.

### 11.2.2 Warning Arrangements

The Office of the Taupulega will receive warning of a tsunami threat from either:

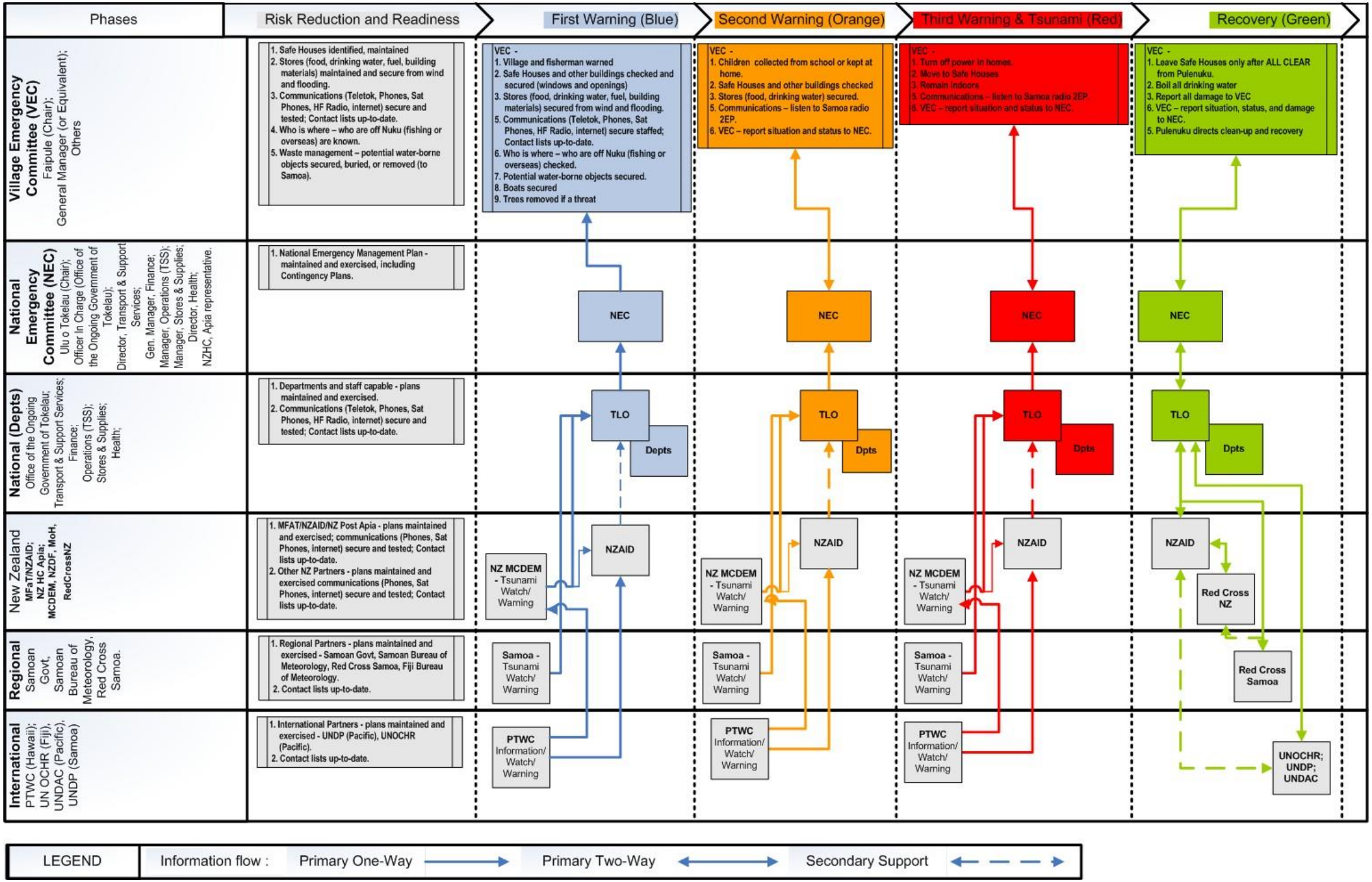
1. The Tokelau Apia Liaison Office; or
2. The Pacific Tsunami Warning Centre (PTWC; Hawaii); or
3. MFAT, New Zealand; or
4. a weather forecast agency

The Office of the Taupulega will alert the village of a pending tsunami threat. There may be two to twelve hours of tsunami travel time before the tsunami waves reach and pass Tokelau.

Warnings will be issued in three response phases that build on the ongoing risk reduction and readiness phase:

| | |
|---|---|
| Phase 1 | First Warning (**Blue** Alert) |
| Phase 2 | Second Warning (**Orange** Alert) |
| Phase 3 | Final Warning (**Red** Alert) |

# Tokelau Tsunami Management



## *11.3 Fire Contingency Plan (to be developed)*

### 11.3.1 Purpose

The aim of the Fire Contingency Plan is to prepare the nuku for a threat of fire and to be able to deal with the effects.

Fire contingencies to consider planning for on each nuku include:

- House
- Fuel Store
- School
- Hospital
- Stores
- Other

## *11.4 Transportation Contingency Plan (to be developed)*

### 11.4.1 Purpose

The aim of the Transportation Contingency Plan is to prepare the nuku for a transportation failure and to be able to deal with the effects.

Transport of food and other essential supplies, including fuel, is dependant on shipping. Scheduled shipping may be disrupted by ship re-prioritisation, break-down or weather.

Tokelau experiences shortages in supplies from time to time but reduces this risk by maintaining stores on each nuku. The security of the stores (from water, wind, etc) and the desirability of more than one store at different locations is to be actively assessed as part of the annual review of emergency management arrangements.

Emergency supplies (e.g. medicines) may be urgently required at a time when either no ship is available or it would take too long to deliver. At such a time it may be possible to deliver by dropping from an aircraft or by a helicopter capable of operating over water and with the range required. Investigation of these options should be made and any requirements planned for.

## *11.5 Boat Contingency Plan (to be developed)*

### 11.5.1 Purpose

The aim of the Boat Contingency Plan is to prepare the nuku for a boating incident and to be able to deal with the effects.

From time to time boat incidents occur. These include:

- boat missing with crew;
- outboard motor breakdown;
- boat caught unexpectedly in rough seas;
- boat capsizes, sinks, or person lost overboard.

All of these are risks associated with boats. Risk reduction treatment can be identified and promoted to fishermen and other boat users. The nukus need to consider recording best boat practice and emergency management arrangements for a boat incident.

## *11.6 Search and Rescue (to be developed)*

A number of authorities may assist with search and rescue (SAR) operations in Tokelau. These include:

- Government of Samoa
- New Zealand Rescue Coordination Centre
- Other

A Pacific Islands Search and Rescue (SAR) Plan is currently under development by the New Zealand Rescue Coordination Centre. The plan will include a section on arrangements for SAR in Tokelau. Please refer to this plan for the latest arrangements.

## *11.7 Drought Contingency Plan (to be developed)*

The aim of the Drought Contingency Plan is to prepare the nuku for a drought incident and to be able to deal with the effects.

During a drought

- Stop all village programmes that use lots of water (eg housing schemes and sea wall construction)
- Use water wisely and take less time when bathing and in showers
- Hand wash clothes
- Hand wash dishes and discourage the use of dishwashers
- Recycle washing water to use for watering plants

# 12 Communications Plan

The communications plan is a record of the person(s) to contact in an emergency, both during work hours and out of office hours. The communication plan includes the alternative communications that may be used during an emergency.

**Tokelau Apia Liaison Office**

Office of the Taupulega

After Hours

Satellite Phone

HF Frequency

**Nukunonu**

Office of the Taupulega

After Hours

Satellite Phone

HF Frequency

**Atafu**

Office of the Taupulega

After Hours

Satellite Phone

HF Frequency

**Fakaofo**

Office of the Taupulega

After Hours

Satellite Phone

HF Frequency

**MV Tokelau**

Satellite Phone

HF Frequency

# 13 Glossary

The following commented glossary is to assist understandings by all partners in Tokelau Risk Reduction. Included are extracts from the UNISDR Terminology on Disaster Risk Reduction (2008).

**Disaster**

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

*Comment: Disasters are often described as a result of the combination of: the exposure to a hazard; the conditions of vulnerability that are present; and insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease and other negative effects on human physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation.*

**Disaster risk**

The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

*Comment: The definition of disaster risk reflects the concept of disasters as the outcome of continuously present conditions of risk. Disaster risk comprises different types of potential losses which are often difficult to quantify. Nevertheless, with knowledge of the prevailing hazards and the patterns of population and socio-economic development, disaster risks can be assessed and mapped, in broad terms at least.*

**Disaster risk management**

The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

*Comment: This term is an extension of the more general term "risk management" to address the specific issue of disaster risks. Disaster risk management aims to avoid, lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness.*

**Disaster risk reduction**

The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

*Comment: A comprehensive approach to reduce disaster risks is set out in the United Nations-endorsed Hyogo Framework for Action, adopted in 2005, whose expected outcome is "The substantial reduction of disaster losses, in lives and the social, economic and environmental assets of communities and countries." The International Strategy for Disaster*

*Reduction (ISDR) system provides a vehicle for cooperation among Governments, organisations and civil society actors to assist in the implementation of the Framework. Note that while the term "disaster reduction" is sometimes used, the term "disaster risk reduction" provides a better recognition of the ongoing nature of disaster risks and the ongoing potential to reduce these risks.*

**Disaster risk reduction plan**

A document prepared by an authority, sector, organization or enterprise that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives.

*Comment: Disaster risk reduction plans should be guided by the Hyogo Framework and considered and coordinated within relevant development plans, resource allocations and programme activities. National level plans needs to be specific to each level of administrative responsibility and adapted to the different social and geographical circumstances that are present. The time frame and responsibilities for implementation and the sources of funding should be specified in the plan. Linkages to climate change adaptation plans should be made where possible.*

**Early warning system**

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

*Comment: This definition encompasses the range of factors necessary to achieve effective responses to warnings. A people-centred early warning system necessarily comprises four key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received. The expression "end-to-end warning system" is also used to emphasize that warning systems need to span all steps from hazard detection through to community response.*

**Hazard** Something that may cause, or contribute substantially to the cause of, an emergency

**Risk** The likelihood and consequences of a hazard

# 14 Situation Report Form

A Situation Report summarises the current situation and describes the actions that need to be carried out during a defined period of time to respond to the emergency.

| SITUATION REPORT | | | |
|---|---|---|---|
| **From:** | | **Serial:** | S nnn |
| **Prepared By:** | | | |
| **Date/Time:** | YYYY – MM – DD T HH : MM | | |

| Assessment Of Current Situation |
|---|
| **Damage:** |
| **People:** (casualties) |
| **Food status and future needs:** |
| **Shelter needs:** |
| **Other welfare needs:** |
| **Damage or state of utility services:** (power, phone, water, sanitation, etc) |
| **Communications:** |
| **Medical facilities, services and resources:** |
| **Other information on situation:** |
| **Weather:** |

| Actions Being Taken and Those Planned for the Future |
| --- |
| |
| **Resources Currently Available on Nuku** |
| |
| **Additional Equipment and Resources Required** |
| |
| **Critical Issues and Priorities** |
| |
| **Environmental Considerations** |
| |
| **Predicted Changes In Situation** |
| |

| | |
| --- | --- |
| **Authorised By:** | |
| **Next Report:** | YYYY – MM – DD T HH : MM |

# 15 Recovery Report Form

A Recovery Report summarises the situation and describes the actions that need to be carried out during a defined period of time to recover from the emergency.

| RECOVERY REPORT | | | |
|---|---|---|---|
| **From:** | | **Serial:** | S nnn |
| **Prepared By:** | | | |
| **Date/Time:** | YYYY – MM – DD T HH : MM | | |

| **Situation Summary** |
|---|
| |

| **Plan of Action/Strategy** |
|---|
| |

| **Objectives** |
|---|
| |

## Critical Elements (note what must happen, when it is required and who is responsible)

## Resource Needs

## Actions Completed

## Communications Plan (technical i.e. frequencies, phone numbers)

| | |
|---|---|
| **Authorised By:** | |
| **Next Report:** | YYYY – MM – DD T HH : MM |