Government of Tokelau

Ministry of Climate, Oceans, and Resilience (MiCORE)

TOKELAU NATIONAL DISASTER RISK REDUCTION, RESPONSE, AND RESILIENCE PLAN (TDR4)

Endorsed by General Fono November, 2019.

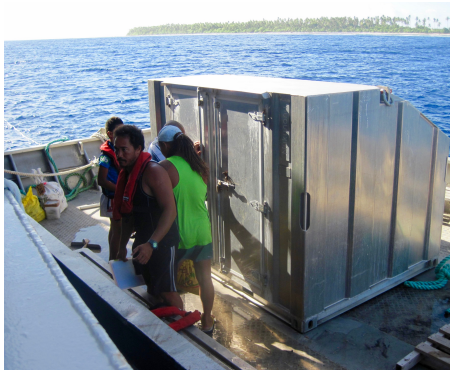

Photo Courtesy: C.L. Anderson 2016. 1) Inter-atoll transport and fishing occurs by motor boat in Tokelau. 2) The ambulance in Fakaofo runs on electric power. 3) Each household has at least one water catchment tank for its water supply. 4) Supplies come into each nuku by off-loading containers from the ship onto barges that can navigate the channels to reach shore where cranes can move the containers onto shore.

Foreword on Endorsement of the Plan

The *Tokelau National Disaster Risk Reduction, Response, and Resilience Plan* (TDR4) reflects our collective effort to prepare for disasters from climate-related, oceanic, seismic, and human-induced threats.

The TDR4 replaces a decade old ad hoc disaster emergency strategy and reflects the lessons we have learned from the past about creating a resilient Tokelau from the three Nuku, neighbouring Pacific Island Countries and Territories (PICTs) and international engagement.

The TDR4 builds on other national efforts to enhance Tokelau's resilience, including the Tokelau National Strategic Plans and *Living with Change: An Integrated National Strategy for Enhancing the Resilience of Tokelau to Climate Change and Related Hazards, 2017-2030*. It also relies on whole of government approach. Collaboration and coordination among the ministries and departments is key to the successful implementation of the TDR4.

The TDR4 was endorsed by the General Fono in November 2019. It provides guidance for disaster risk reduction, response and resilience efforts at all levels (local, kukus and national) but recognises that efforts to manage and reduce risks are ongoing. As we build our capacity and enhance our infrastructure to deal with coastal inundation, sea level rise, storms, tsunami, ship groundings, fires/chemical explosions, pandemic and infectious diseases, and other threats, these knowledge and experiences will be incorporated into the TDR4 over time.

We know that our ancestors have left us a legacy of thriving in our atoll nation by working together. The TDR4, coordinating national and village (nuku) disaster risk reduction and response, will ultimately protect lives and property and enhance our resilience.

Ke Ola,

Honorable Kelihiano Kalolo
Ulu o Tokelau
Minister, Ministry of Climate, Oceans, Resilience

Acknowledgements

This Tokelau National Disaster Risk Reduction, Response, and Resilience Plan (TDR4) builds upon significant efforts engaged by the Government of Tokelau (GoT) and the Nuku of Atafu, Fakaofo, and Nukunonu. Since 2003 when the rules for emergency management were created, followed by the 2011 Draft Disaster Risk Reduction Plan, the Nuku Community Disaster and Climate Risk Management (CDCRM) plans in 2014, the Living with Change (LivC) Strategy and Implementation Plan (2017), the Tokelau National Strategic Plan (2016), cyclone and emergency training by the MiCORE DMU (2018), logistics training and delivery emergency supplies by MiCORE DMU and the Samoa Red Cross (2019) with additional First Aid and CPR provided in Nukunonu, and the current consultations in 2019 for the update of this plan, which have been extensive. We appreciate significant input from the Village Disaster committees and the people of Tokelau participating in multiple consultations. We sincerely thank those who have translated this plan in order that everyone in Tokelau may understand it.

Date	Consultation	Description
5,10 April 2019	Atafu Taupulega	Reviewed process for the TDR4 plan and received permissions for engaging local stakeholders, including VDC. Discussed importance of the plan and DRR legislation. Discussed scenarios of multiple risks, including fire. Gave blessings for using Atafu DR4 with the other Nuku Plans as the basis for the National Plan.
5, 8 April 2019	Atafu Fatupaepae	Participated in an overview of the project, scenarios of different types of disasters with multiple impacts; provided input on ways to address different types of emergencies. Demonstrated knowledge of their local response plan.
7 April 2019	Atafu Aumaga	Participated in an overview of the project, scenarios of different types of disasters with multiple impacts; provided input on ways to address different types of emergencies. Demonstrated knowledge of their local response plan.
8,9 April 2019	Atafu Village Disaster Committee	Reviewed previous Atafu CDCRM plan, then revised and updated information. Prepared presentation for Taupulega.
9 April 2019	Atafu School Principal	Discussed ways to integrate disaster and climate knowledge in the education system. Fire and evacuation plans drilled. Readiness to serve as shelter for evacuation for some hazards.

14 April 2019	Nukunonu Village Disaster Committee	Provide overview of planning process; Nukunonu VDC accepted responsibility for updating their 2014 plan.
15, 16 April 2019	Nukunonu Taupulega	Reviewed process for the TDR4 plan and received permissions for engaging local stakeholders, including VDC. Discussed importance of the plan and DRR legislation. Gave blessings for using Nukunonu DR4 with the other Nuku Plans as the basis for the National Plan.
15 April 2019	Nukunonu Fatupaepae and Aumaga	Participated in an overview of the project, scenarios of different types of disasters with multiple impacts; provided input on ways to address different types of emergencies. Demonstrated knowledge of their local response plan.
17, 18 April 2019	Fakaofo Taupulega	Reviewed process for the TDR4 plan and received permissions for engaging local stakeholders, including VDC. Discussed importance of the plan and DRR legislation. Gave blessings for using Fakaofo DR4 with the other Nuku Plans as the basis for the National Plan.
17 April 2019	Fakaofo Fatupaepae	Participated in an overview of the project, scenarios of different types of disasters with multiple impacts; provided input on ways to address different types of emergencies. Demonstrated knowledge of their local response plan.
17 April 2019	Fakaofo Aumaga	Participated in an overview of the project, scenarios of different types of disasters with multiple impacts; provided input on ways to address different types of emergencies. Demonstrated knowledge of their local response plan.
17, 18 April 2019	Fakaofo VDC	VDC members participated in the consultations with other groups; Fakaofo Emergency Plan had been exercised, and requested integration of their plan into the Fakaofo Disaster Risk Reduction, Response, and Resilience Plan (FDR4).
24 April 2019	Tokelau Senior Management Team	Provided an overview of the planning process. Discussed roles and responsibilities for the plan. Discussed consultations in the Nuku, and recommendation that the Nuku plans be used as the foundation for the National Plan (TDR4).

Living Document - Updates with Best Available Data & Version Control

As this plan is reviewed every five years and as projects are updated annually, it will be important to maintain a record of activity.

Date	Organisation and Consultation Participants	Description of Update or Achievement & Personnel who made the changes
Draft Version 1	May 2019	Prepared by LeA Consultancy: Cheryl Andyson.
Draft Version 2	June 2019	NDMO based on Village consultation
Draft Version 3	June 2019	NDMO based on consultation with National Departments and CDCRM Programme Review
Final Draft Endorsed by Council to be submitted to November GF	July 2019	MiCORE Director
Final Draft submitted and endorsed by General Fono	November, 2019	MiCORE Director

Acronyms

ADR4	Atafu Disaster Risk Reduction, Response and Resilience Plan
AWS	Automated Weather Station
CIMS	Coordinated Incident Management System
CRIP	Climate Resilient Investment Pathways
CROP	Council of Regional Organizations in the Pacific
CSO	Civil Society Organization
DoE	Department of Education
DoF	Department if Finance
DoH	Department of Health
TSS	Department of Transport & Support Services
DRF	Disaster Response Framework
DRR	Disaster Risk Reduction
ED	Energy Department
EDNRE	Department of Economic Development, Natural Resources, & Environment (Tokelau)
EEZ	Exclusive Economic Zone
FDR4	Fakaofo Disaster Risk Reduction, Response and Resilience Plan
FMA	Fisheries Management Agency
FY	Fiscal Year
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GF	General Fono
GoT	Government of Tokelau
HR	Human Resource
IC	Incident Controller
ICT	Information and Communications Technology
ICU	Island Climate Update
IFC	International Finance Corporation World Bank Group
IPCC	Intergovernmental Panel on Climate Change
LivC	Living with Change: An Integrated National Strategy for Enhancing the Resilience of Tokelau to Climate Change and Related Hazards, 2017-2030.
MCDEM	Ministry of Civil Defense and Emergency Management (NZ)
MDG	Millennium Development Goals
MFAT	Ministry of Foreign Affairs and Trade (NZ)
MiCORE	Ministry of Climate, Oceans, and Resilience
NDC	National Emergency Committee
NDMU	National Disaster Management Unit
NDMP	National Disaster Management Plan
NDR4	Nukunonu Disaster Risk Reduction, Response and Resilience Plan
NGO	Non-governmental Organization
NPHEP	National Public Health Emergency Plan
NZD	New Zealand Dollar

OCOG	Office of the Council for the Ongoing Government
PMU	Planning and Monitoring Unit, OCOG
PTWS	Pacific Tsunami Warning System
SDG	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction, 2015-2030
SLR	Sea Level Rise
SMT	Senior Management Team
SPC	Secretariat of the Pacific Community
SPCZ	South Pacific Convergence Zone
SPREP	Secretariat of the Pacific Regional Environment Programme
SST	Sea Surface Temperatures
TA	Technical Assistance
TALO	Tokelau Apia Liaison Office
TeleTok	Telecommunications Tokelau
TNSP	Tokelau National Strategic Plan
TOR	Terms of Reference
TPSC	Tokelau Public Service Commission
UN	United Nations
UNDP	United Nations Development Program
UNESCO	United Nations Environment, Science and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
VDC	Village Disaster Committee
WB	World Bank

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1.0 Introduction to Disaster Management in Tokelau

1.1 Purpose of the Plan

The purpose of this Tokelau Disaster Risk Reduction, Response, and Resilience Plan (TDR4) is to identify and reduce multiple disaster risks to Tokelau and enhance the capability to respond to and recover from multiple types of disasters in order to enhance resilience.

Tokelau is comprised of three atolls (nuku). The unique geography presents logistical challenges that require each nuku to build its own disaster management capability in order to effectively deal with disasters and emergencies. Therefore, this overarching national plan reflects the need to build upon local emergency management efforts to fully build a resilient and ready nation.

The plan must coordinate and communicate among the three nuku of Tokelau - Atafu, Nukunonu, and Fakaofo, Samoa Government and organisations (as the port of entry and liaison), New Zealand, and international partners.

The objectives of TDR4 are to:

1) Identify disaster risks and vulnerabilities for Tokelau;
2) Identify risk reduction strategies;
3) Ensure readiness capability in Tokelau;
4) Outline the national disaster response framework;
5) Ensure that recovery from any disaster occurs in a way that further reduces future risks; and,
6) Enhance the resilience of Tokelau.

1.2 Disaster Risk Reduction Planning in Tokelau

This plan is prepared for the consideration and approval of the General Fono during its July 2019 meeting. This plan builds on extensive efforts and consultations since 2003, and seeks to be the overarching plan built on the Village or *Nuku* plans. This document will be considered a "living document"[1] that has been produced and will be updated using the consideration of "best available data"[2] to reflect the ongoing efforts in Tokelau to reduce risks and improve resilience.

The disaster risk reduction actions included in this document will be reviewed on an annual basis to document achievements and propose additional measures based on new, updated data and information. The TDR4 will be reviewed fully and approved every five years to capture lessons learned from coping with disasters or changes identified to further reduce risk. This plan will align with approved Tokelau Government plans, specifically the *Tokelau National Strategic Plan, 2016-2020* (2016) and *Living with Change (LivC): An Integrated National Strategy for Enhancing the Resilience of Tokelau to Climate Change and Related Hazards, 2017-2030* (2017) and the LivC Implementation Plan (2017).

[1] A living document refers to a document that is not static and will be updated as improved data and information becomes available, and as risk reduction and resilience projects are achieved.
[2] Best Available Data refers to the use of the data in this plan at the time of review and approval by the General Fono, recognizing that a number of ongoing efforts will improve the information in the future.

The TDR4 will further be supported by updated legislation that reflects the complexity of disasters and terminology for disasters, such that an "emergency" may reflect a short-term event; whereas "disaster" will be more comprehensive in its inclusion of longer-term time horizons as well as the integration of a natural hazard with human-induced hazards and cascading events. The new legislation will cover the process of disaster risk reduction and resilience as well as response, which was the sole focus of the Tokelau Emergency Rules of 2003.

The history of disaster risk reduction planning in Tokelau evolved from several efforts that produced Tokelau Emergency Rules of 2003, followed by a response plan in 2005, and the Draft Disaster Risk Reduction Plan in 2011. Although the 2011 plan remained in draft form, it was operationalized and used in 2017 to respond to lost vessels at sea; however, in 2019, it is important to update information due to the extensive development in each Nuku, and the additional risks from climate change that will exacerbate disaster risks for Tokelau. In 2014, each Nuku developed a Draft Community Disaster and Climate Risk Management Plan (CDCRM) that integrated disaster risk reduction with disaster response. In the development of these plans, task forces were developed and trained for different actions during response phases of the disaster.

The Living with Change (LivC) Strategy and Implementation Plan (2017) further identified risk reduction measures specifically for climate change that correlate with disaster risk reduction (DRR) measures in the areas of adaptation and human development. These contributed to the basis of identification of risk reduction measures, but the 2019 consultations have further expanded the list for other hazard considerations, such as health, seismic and geological risk, human-induced hazards (oil spills, fire and explosions, loss at sea), and multiple simultaneous events (such as TC Tusi and the oil spill in Atafu in 1987).

In order to move all of the disaster-related plans towards completion and approval, Tokelau MiCORE engaged the villages in local consultations to build awareness of response efforts to tropical cyclone hazards in 2018. This engagement followed with the DMU Logistics training and consultations that coincided with delivery of emergency supplies in containers to each Nuku in early 2019. The plans reference several contingency plans that were developed but not finalised, and we acknowledge these numerous efforts towards building the resilience of Tokelau.

In April 2019, a team consisting of MiCORE began consultations on the updated plan. Although the plan attempts to be comprehensive and fully consultative, it is considered a living document and will be regularly updated. There was significant input and advice for this plan from Fakaofo, Nukunonu, and Atafu, as well as the logistics supported by the General Managers from each nuku and the Department of Transport & Support Services. In each Nuku, the plans were supported by participation of the Village Disaster Committees and consultation with the Taupulega, Fatupaepae, Aumaga, and professionals groups at each location. These consultations and the update of the local plans (Atafu Disaster Risk Reduction, Response, and Resilience Plan (ADR4); Nukunonu Disaster Risk Reduction, Response, and Resilience Plan (NDR4); and Fakaofo Disaster Risk Reduction, Response, and Resilience Plan (FDR4)) form the basis for this national plan (TDR4).

1.3 Administration, Coordination and Support for DRR and Response

Disaster Risk Reduction, readiness, and ***resilience*** efforts will be coordinated by MiCORE, the NDMU, OCOG, and the Senior Management Team (SMT) also addressed within this plan as the National Disaster Committee (NDC) with the Atafu, Nukunonu, and Fakaofo Taupulega, Village Disaster Committees and the General Managers. Each sector contributes to risk reduction and risk management in various ways, depending on the type of disaster. The Tokelau National Strategic Plan, 2016-2020 further supports DRR by focusing on good governance, human development, the infrastructure development, sustainability, and climate change. Planning to reduce these risks requires integration of sectors as well as whole-of-community efforts. MiCORE NDMU will ensure coordination of the plans and implementation, as well as monitor progress for achieving risk reduction actions.

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. 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.

Tokelau is supported upon request for assistance and disaster **declaration by the Ulu** in times of disaster and emergency ***response*** and ***recovery*** 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 (Met Service);
  - 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);
  - UNOCHA (Fiji);
  - Pacific Tsunami Warning Centre (PTWC; Hawaii).

1.4 Responsibilities in Tokelau Disaster Management

Disaster management involves several key phases in a cycle related to any hazard, threat, or emergency. These include: Disaster Risk Reduction; Readiness; Response; Recovery; and Resilience.

> ***Disaster Risk Reduction*** - Reducing or minimising the potential loss of life, injury, or destroyed or damaged assets which could occur from a disaster. This phase involves identification of risks and actions to reduce or eliminate these risks, often through planning activities.
> ***Readiness*** - The phase in which preparation for dealing with disasters occur. This involves public awareness, training, exercises, and, for some hazards, listening to warnings and alerts to actively make sure that the population is ready for the disaster.
> ***Response*** - Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
> ***Recovery*** - The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and "build back better," to avoid or reduce future disaster risk.
> ***Resilience -*** The ability of a system, people, households, communities, countries, or society exposed to hazards to resist, absorb, accommodate, adapt to, transform, and recover from the effects of a hazard in a timely and efficient manner. The overarching goal is for communities to reach a stage of resilience in which they are able to deal with any type of threat.

Given the ongoing nature of the disaster cycle, it is important to use "whole-of-community" approaches that involve every person, organisation, Nuku, and government in many of these phases.

The Nuku plans, which are the foundation for this TDR4 plan, address the on-the-ground risks where disasters happen. In addition, due to the geography whereby Tokelau is a large ocean atoll state, the Department of Transport & Support Services becomes critical for addressing key threats in the ocean, such as transport failure, loss at sea, and search and rescue operations.

In addition, each government department has responsibilities throughout each phase of the disaster. These are described in the following table, Table 1-1.

Table 1-1. Organisation Roles in TDR4.

Government of Tokelau		Role in TDR4 DRR	Readiness	Response	Recovery	Resilience
Nuku's	VDC & Taupulega	Engage in planning to identify and reduce risks for multiple types of hazards and impacts. Adapt and enforce plan implementation Secure risk financing.	Engage in training activities. Prepare water resources; facilities; etc. Position emergency supplies; maintain supplies and equipment.	Enact local plans to ensure safety of people and protect livelihoods and nuku. Communicate with national government, if assistance required.	Ensure planning to build back better. Use Recovery Report Form to communicate recovery needs to GoT.	Engage in planning, maintenance, and every day "best practices" to ensure that people and nuku can respond to impacts.
Office of the Council for the Ongoing Government - OCOG	Legal	Rules Legislation/ Regulations Building Codes	Rules Legislation/ Regulations	Rules Legislation/ Regulations	Rules Legislation/ Regulations Building Codes	Rules Legislation/ Regulations
	Statistics	Key data to ID Risk: Population, HH, Livelihoods	Key data for preparing Emergency Supplies, Logistics	Provide data to aid in DMO requests	Key data: Population, HH, Livelihoods	Maintain records & statistics
	Foreign Affairs	DRR project support	Establish MOA w/orgs for training & RR	Seek assistance from NZ, Samoa, others	Secure assistance for recovery	Participate in SDGs, Sendai Framework, Paris Agreement, Human rights & other conventions
	Planning & Monitoring Unit	Ensure National Development & Strategic Plans (TNSP) are incorporated into DRR; improve infrastructure	Ensure that infrastructure development in TNSP will meet readiness for multiple disasters; ensure human development exercises and training builds readiness	Participate as needed to ensure best available data is used in response and in requests for assistance.	Recover using actions from plans to "build back better"	Ensure alignment of plans/DRR with TNSP, other goals/ projects
Climate, Oceans, & Resilience - MiCORE	Climate	Build understanding of climate risks; ID RR actions; implement RR	Ensure 'readiness' for climate-related threats; public awareness and training	Provide best available climate data for use in response activities	Ensure that recovery incorporates actions to "build back better."	Ensure alignment of plans/DRR with LivC, actions and other goals/ projects
	NDMU	Build understanding of disaster risks; ID RR actions; coordinate & implement RR	Coordinate Emergency Supplies & Logistics, Training	Coordinate w/GoT, NDC and Nuku to support response actions	Coordinate w/GoT, NDC & Nuku VDC to support recovery actions	Ensure alignment of plans/DRR with LivC, other goals/ projects
	Oceans	Build understanding of ocean risks & benefits; ID RR actions; coordinate & implement RR & conservation	Provide readiness coordination, public awareness, and training for ocean-related threats	Support NDMU, GoT, and Nuku in response actions	Ensure recovery efforts do not adversely affect ocean & marine environments	Ensure alignment of plans/DRR with LivC, Ocean Acidification, other goals/ projects

	Resilience	Build understanding of resilience; ID resilient actions; coordinate & implement actions	Ensure preparedness for climate and disaster risks; ensure training & capacity building	Support NDMU, GoT, and Nuku in response actions	Ensure Recovery efforts "build back better," & contribute to long-term resilience	Ensure resilience for climate and disaster risks; ensure capacity building & human development
Economic Development, Natural Resources & Environment - EDNRE	Environment (Water, Inshore Fisheries, Handicrafts, Meteorology)	Monitor environment; develop environmental policies; work with NDMO to identify and reduce environmental risks	Prepare warnings and ensure public safety; Engage in training	Ensure environmental disasters are not secondary emergencies	Ensure critical lifelines are recovered: water, agriculture, waste management	Water security; food security; sustainable management
	Economic Development	Food and water security; livelihood security	Public awareness & training for livelihoods & environmental monitoring	Support NDMU, GoT, and Nuku in response actions	Ensure economic & livelihood recovery	Ensure economic & livelihood resilience; ongoing environmental monitoring
	Quarantine (Biosecurity)	Plans for biosecurity, especially during crises	Public awareness & training for livelihoods & environmental monitoring	Response for invasive species	Ensure recovery efforts do not allow invasive species; monitoring of relief supplies	Prevent invasive species threats; ongoing environmental monitoring
Education - DoE	Education (all levels)	Build awareness thru science curricula	Build awareness thru science curricula	Build awareness thru science curricula	Build awareness thru science curricula	Build awareness thru science curricula
Energy	Critical lifeline	Plan for continuity in operations; Secure facilities & equipment for all phases	Backup - batteries; generators; equipment & supplies for repairs	Ensure back-up capability for various hazards	Conduct assessments of energy system and needs; conduct repairs	Increase reliance on renewable energy
Finance - DoF	Government	Advise on Risk Finance and secure "rainy day" funding; Guide financial implementation on DRR/Resilience projects	Ensure financial systems have risk assessment; backup data; ensure that FO have trained for emergencies	Work with Transport Procurement to ensure delivery of response needs; Logistics	Ensure finance for recovery	Maintain accounts, investments, diversify portfolios; engage in insurance schemes or other risk financing
	Nuku - Atafu Taupulega	Identify DRR project funding; aid in securing funding to reduce risks	Human development in risk financing, securing funds for training, logistics, and emergency supplies	Support NDC in response activities	Ensure finance for recovery	Maintain accounts, investments, diversify portfolios engage in insurance schemes or other risk financing
	Nuku - Nukunonu Taupulega	Identify DRR project funding; aid in securing funding to reduce risks	Human development in risk financing, securing funds for training, logistics, and emergency supplies	Support NDC in response activities	Ensure finance for recovery	Maintain accounts, investments, diversify portfolios; engage in insurance schemes or

						other risk financing
	Nuku - Fakaofo Taupulega	Identify DRR project funding; aid in securing funding to reduce risks	Human development in risk financing, securing funds for training, logistics, and emergency supplies	Support NDC in response activities	Ensure finance for recovery	Maintain accounts, investments, diversify portfolios; engage in insurance schemes or other risk financing
Fisheries Management Agency - FMA	Offshore Fisheries	Develop protocols for foreign fishers in vessel grounding, or other transport issues	Provide training on protocols for engaging foreign vessels	Response for fishing vessel grounding	Support recovery efforts as needed for economic and food security	Sustainable fisheries management; participation in Pacific agreements; capture investments with ENSO shifts; food security
Health - DoH	Public Health	Develop protocols for pandemics, epidemics, other disease outbreak, and environmental hazard (i.e. septic storage leaching into food supply)	Provide training & exercise plans for health hazards; review medical supplies monthly to ensure availability in time of disaster; ensure facilities have back-up energy sources and equipment	Enact Public Health Emergency Plan	Ensure recovery of health facilities; ensure healthy recovery of population	Monitor health threats; ensure ongoing protocols for a healthy population
	Clinical Health	Conduct operational needs assessment; identify population at risk; Identify facilities & equipment at risk & seek solutions for improvement	Ensure medical supplies availability to withstand disaster; train staff to deal with multiple emergencies; develop evacuation plans and contingencies	Ensure staff can deal with emergency; ensure evacuation plans w/ Community; ensure facility safety or evacuation protocols	Ensure staff can aid in recovery efforts	Build CPR/ First Aid knowledge in community
Public Service Commission - PSC	Human Resources	Ensure continuity of staffing and positions	Work w/NDMO to ensure public services are trained/ prepared for multiple types of emergencies	Engage in operational emergency procedures.	Ensure that recovery efforts are supported. Assist in identifying technical assistance that may be needed.	Ensure public services meet Tokelau needs
Telecommunications (TeleTok)	Critical lifeline	Key for communications; Develop early warning system for emergencies with Transport and NDMO	Develop communications plan for emergencies; work with Nuku, Transport & NDMO to ensure redundancy; have equipment and materials available for incidents	Provide communications during emergency	Recover communication systems	Ensure com system works for everyone; ensure availability to everyone in emergencies

Transport & Support Services - TSS	Immigration, BDM (Births, Deaths, & Marriage)	Planning for Multiple Risks through all stages of Disaster	Data management & backup; Work with Health to determine protocols to quarantine	Evacuation, Foreign vessels; Keep accurate records during emergency	Aid in identification of recovery needs, such as deaths/births and influx of volunteers and technical assistance	Ensure data management and records kept for Tokelau with Statistics; Ensure that population is known.
	Operations	Planning for Multiple Risks through all stages of Disaster; Boat and Transport Failure Contingency Planning	Ensure that training occurs to keep operations going.	Incident Controller for some hazards; Logistics, SAR, Oil Spill Response, Boat Loss	Aid in recovery efforts as needed, according to Nuku requests	Ensure ongoing operations critical to needs of each Nuku, and Tokelau.
	Procurement	Ensure that DRR planning involves consideration of materials for infrastructure development and maintenance. Ensure long-term planning for supplies, especially with health. Assist in Risk Financing planning.	Work w/NDMU to ensure emergency supplies available.	Logistics; providing materials, supplies, technical support as needed during the response phase.	Supply & deliver equipment, materials, relief assistance, and other goods required for recovery	Ensure that supplies are maintained. Provide budget considerations for emergencies.
	Shipping	Engage in DRR and contingency planning, with support for consultations in Nuku.	Ensure delivery of logistics, supplies. Share crew knowledge for fire, oil spill response, etc.	Logistics, Loss at Sea/SAR, Assessment Teams, Volunteers	Provide supplies and technical assistance for recovery	Ensure that ongoing maintenance and crew training contribute to efficiencies and best practices.
	Support Services (Samoa Postal Service)	Engage in DRR planning to ensure that services will be maintained in crises.	Ensure that actions for hazard preparation; work with SMT and DMU to ensure contingencies considered.	Medical Evacuation; Arrange for technical support related to impacts; Maintain communications with Nuku.	Provide supplies, technical assistance, and other needs for recovery	Maintain ongoing support services for Tokelau

1.5 Adoption of the Plan and Implementation

The adoption of the TDR4 plan was approved by the General Fono in its final General Fono sitting in November, 2019, with approval of each of the Nuku plans by their respective Taupulega.

Each Nuku is governed by its Taupulega (Council of Elders), who are ultimately responsible for adopting their respective village plans and ensuring implementation on each Nuku. The NDMU will coordinate risk reduction efforts with the General Manager and Village Disaster Committees (chaired by the Pulenuku).

2.0 Profile of Tokelau and its Assets

2.1 Geography of Tokelau

Tokelau consists of three villages (nuku): 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 4.7 sq. km. Fakaofo and Atafu are 4 sq. 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.

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.

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

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 Falē) 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 nuku.

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 nuku. 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.

2.2 Population and Livelihood of Tokelau

The most recent census in 2016 recorded the total population of Tokelau at 1499, distributed across the three Nuku (See Table 2-1. Atoll/place of usual residence). Since 2011, the population has increased slightly.

Table 2-1. Atoll/place of usual residence.
By sex
Tokelau Census of Population and Dwellings, 2011 and 2016
For de jure usually resident population

Atoll/place of usual residence	Census year					
	2011			2016		
	Male	Female	**Total**	Male	Female	**Total**
Atafu	225	257	482	251	268	519
Fakaofo	234	256	490	226	258	484
Nukunonu	222	175	397	251	197	448
Samoa	20	22	42	28	20	48
Total	701	710	1,411	756	743	1,499

Source: Tokelau National Statistics Office and Statistics New Zealand

Employment is primarily with Tokelau Public Service (TPS). On each Nuku, there are a number of professional positions, such as teachers, nurses, administrators, and police. Labourers, agriculture, and fisheries were the most common forms of employment. Unpaid work helps society to function, which is beneficial to building resilience. In addition, the local system of inati exists, whereby resources are shared. This type of system can greatly benefit response and recovery from disasters.

According to the census, most of the housing stock has become relatively homogenised as a result of the housing scheme established in 1980 by the New Zealand Government (Tokelau National Statistics Office 2017). These are "European style" concrete houses with tin roofing. Many of the houses were originally built with water catchment tanks at the base; however, storm inundation and some inadequate construction methods (using saltwater for mixing concrete) have resulted in disuse of many of these except for non-potable needs (Waugh 2014). Most houses (94.5%) have private water tanks to catch rainwater (TNSO 2017). Sanitation involves use of septic tanks.

In 2012, Tokelau shifted from diesel-generated electricity to close to 100 percent renewable energy generation. The renewable energy system comprising of solar panels, storage batteries and generators running on biofuel derived from coconut will generate enough electricity to meet 150% of the islands' power demand (Government of Tokelau https://www.tokelau.org.nz/Solar+Project.html). file:///Users/clanderson/Downloads/https:/www.tokelau.org.nz/Solar+Project.html) Diesel generation is still available for redundancy and back-up should the system fail. The solar array, batteries, and energy storage system require maintenance. Petrol and fuel are still used for heavy equipment and vehicles. It is also used for boats, both barges and motorboats for inter-atoll fishing and transport. Seventy-two percent of households use gas stoves for cooking, having moved away from kerosene stoves (TNSO 2017).

TeleTok set up landline phone system since 1997, after using Peacesat satellite telecommunication systems from 1994 (Callum 1997). Since 2016, TeleTok developed a mobile phone system using Android smartphones within each of the Nuku in addition to the landline system. Internet is available at almost half of the households in 2016. Sky

television access nears 30% coverage of households (TNSO 2017). The ability to now receive early warnings for hazards and other threats has improved significantly.

2.3 Maps of Tokelau

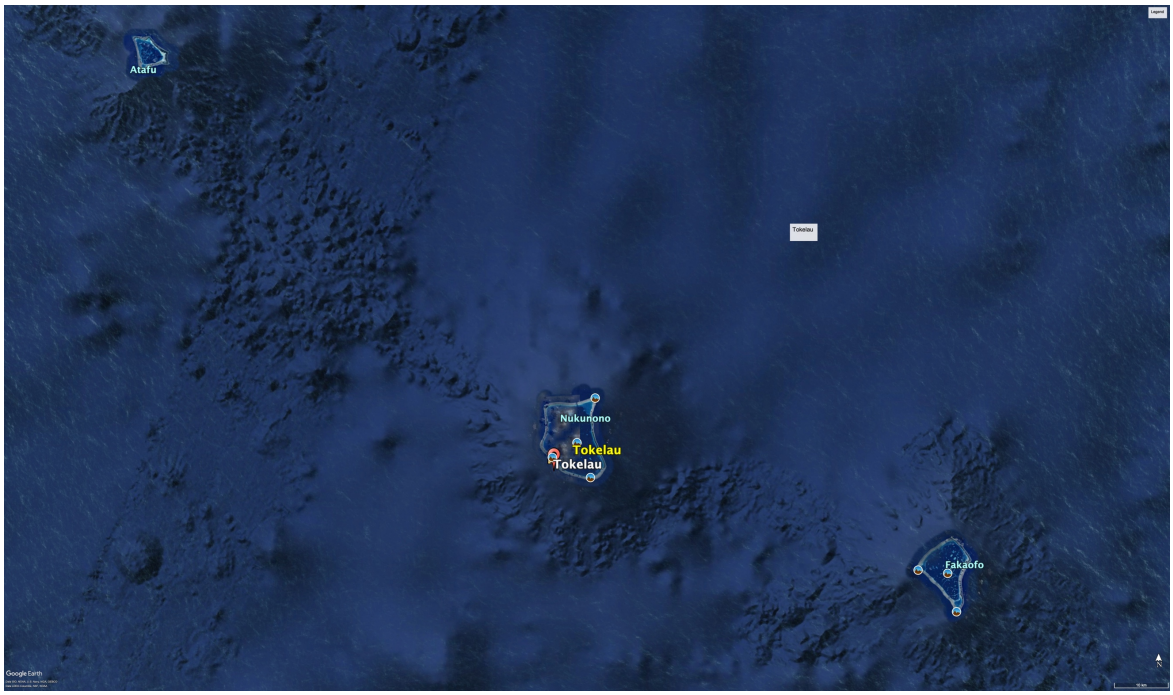

Figure 1: Tokelau. Source: Google Earth 2019, based on Data from SIO, NOAA, US Navy, NGA, GEBO; Data LDEO, Columbia, NSF, NOAA

Figure 2: Atafu Atoll. Source: Google Earth 2019, based on 2018 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF.

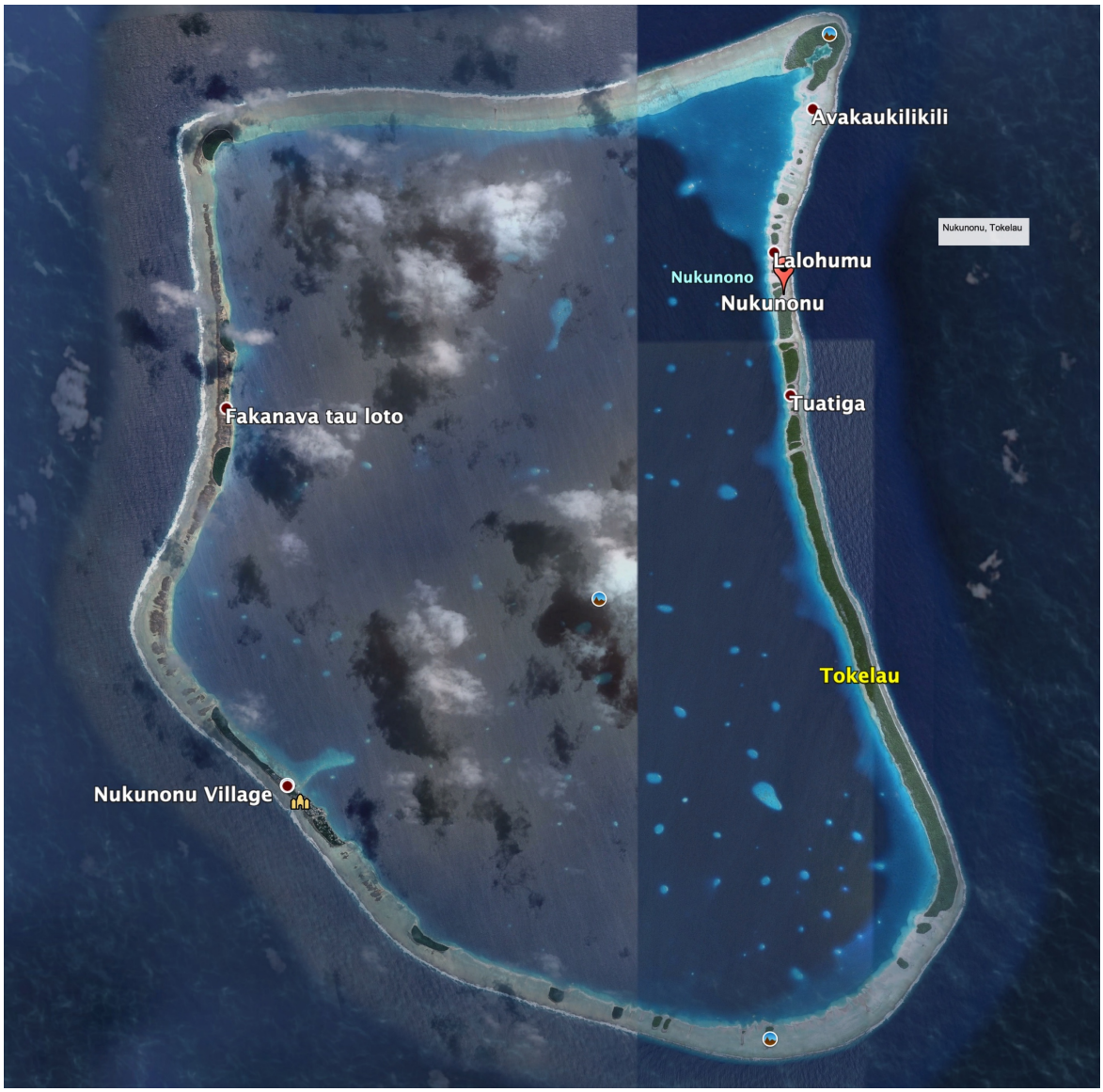

Figure 3: Nukunonu Atoll. Source: Google Earth 2019, based on 2016 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF.

Figure 4: Fakaofo Atoll. Source: Google Earth 2019, based on 2009 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF.

Figure 5: Atafu Village. Source: Google Earth 2019, based on 2009 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF, NOAA. Updated labels from Atafu consultations, 2019.

Figure 6: Nukunonu Village - Northwest Detail. Source: Google Earth 2019, based on 2015 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF. Updated Labels from Nukunonu consultations, 2019.

Figure 7: Nukunonu Village - Southeast Detail. Source: Google Earth 2019, based on 2015 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF. Updated labels from Nukunonu consultations, 2019.

Figure 8: Fakaofo Village - Fale Island. Source: Google Earth 2019, based on 2009 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF. Updated labels from Fakaofo consultations, 2019.

Figure 9: Fakaofo Village - Fenuafala Island. Source: Google Earth 2019, based on 2009 Data from SIO, NOAA, US Navy, NGA, GEBCO; Data LDEO, Columbia, NSF. Updated labels from Fakaofo consultations, 2019.

3.0 Disaster Risk Reduction and Resilience

3.1 Hazard Profile

This plan considers a full range of hazards that may be categorised as hydro meteorological, health-related, geological and seismic risks, and human induced threats. There is also likelihood that one event might precipitate other hazards, which is referred to as cascading disasters. Examples include the 1987 TC Tusi that caused an oil spill in Atafu. Others include cyclones that cause coastal inundation and affect power systems.

Many of the disasters result from natural hazard events with higher likelihood for hydro meteorological hazards during ENSO events. Of the three atolls, the highest risk for storms is Nukunonu, followed by Fakaofo, and then Atafu, which is closer to the equator. Non-tropical storms with sudden high winds have resulted in boat loss at sea or drowning throughout the Pacific region.

Table 3-1. History of Hazards

Hazard Type	Year	Impacts
Afa Lahi (the Great Cyclone)	1914	Affected all villages; devastated crops and housing
Cyclone	1966	Wave swells and storm surge
Cyclone Tusi (and oil spill)	1987	Affected all villages; oil spill in Atafu; Loss of ulu (breadfruit) and pulaka (taro); homes along coastline destroyed; Sea water filled underground water tanks; Impacted Meeting Houses, Churches, Bulk Stores, Petrol Storehouse
TC Ofa	1990	Affected all villages; Wave over wash; loss of housing; damage to food crops
TC Val	1991	Affected all villages; Wave over wash; loss of housing; damage to food crops
TC Percy	2005	Category 3, affecting all villages, but greater impacts on Nukunonu and Fakaofo; storm surge and coastal inundation (1-2m, and up to 3m during largest wave grouping); Almost all buildings sustained damage (Approximately 80% of homes on Nukunonu sustained moderate to major wind and water damage), with at least 7 homes destroyed; infrastructure and roads have been damaged. Damage was sustained to seawalls on all 3 atolls as well as the destruction of staple food crops; four reported injuries, no deaths
Flooding/Wave Inundation	2010	50% of Atafu affected
Drought	2011	Required water and food relief assistance; Atafu lost 80% coconuts
Loss at Sea	2017	Ministry of Transport worked with New Zealand to perform search and rescue operation for lost vessel.

Although historically, the incidents of physical failures and human-induced disasters have mostly occurred along with impacts from cyclones and storm inundation; however, many of these types of hazards and physical failures could be prevented with planning, training, and lifecycle management of infrastructure (Assets Management Plan 2014, 53).

Table 3-2. Hazards and Overall Risk.

Hazard **Key** E – Extreme H – High M – Medium L – Low	**History** *The recorded occurrence of previous similar disasters or events*	**Vulnerability** *The percentage of population and amount/value of property that is at risk from each hazard*	**Maximum Threat** *The maximum percentage of population and property that could be impacted under a worst-case scenario*	**Probability/Trend** *The number of occurrences of each hazard in the past 100 years and the factors that have contributed to increased or decreased risk for the hazard involved*	**Overall Risk**
HYDOMETEOROLOGICAL - WEATHER AND CLIMATE					
Cyclone	E	E	E	E	E
Severe weather and non-tropical cyclone systems	E	E	E	E	E
Drought	E	E	M	H	E
Flood –Storm surge	M	H	E	E	E
Flood – heavy rain	M	M	M	M	M
Coastal inundation	H	H	E	E	E
Coastal erosion	H	H	E	E	E
Water spout	L	H	H	H	H
Bush fire	L	L	L	L	L
Extreme temperatures & Humidity	H	H	H	E	E
HEALTH					
Disease Epidemic	M	M	M	M	M
Waterborne/ Gastrointestinal	M	M	M	M	M
Respiratory Illness	L	L	M	M	M
GEOLOGICAL/SEISMIC					
Landslide	L	L	L	L	L
Landslip (into ocean)	L	L	L	L	L
Earthquake	L	L	L	L	L
Tsunami and inundation from run-up	L	L	M	M	M
HUMAN-INDUCED					
Oil spill	M	H	H	H	H
Hazardous Materials spill	M	E	E	E	E
Waste contamination of groundwater	L	M	H	H	H
Waste contamination of marine areas	L	H	H	H	H
Search & Rescue	L	H	H	H	H
Transport Failure	E	E	E	E	E
Loss at Sea	H	H	E	E	E
Fire (house)	M	M	H	M	M
Fire (critical facilities; critical lifelines; facilities with accelerants; potential explosion)	M	E	E	H	E

Sources: LivC 2017; Asset Management Plan 2014; Lefale, Diamond, and Anderson 2018; Nukunonu, Atafu, & Fakaoko CDCRM 2014.

3.2 Risk and Vulnerability Assessment

Risk and vulnerability assessments identify the assets (i.e., people, infrastructure, sacred places, environment and natural resources, agriculture and food resources, water resources, livelihoods and economic resources) that may be exposed to a hazard and then consider the sensitivity of the asset (the percentage of damage) and the capacity of the community to deal with the hazard (i.e., knowledge, good governance, resources). The vulnerability to each hazard will vary depending on the resilience of the people, community, village, or nation to withstand impacts and recover from the hazard.

The people of Tokelau have for many centuries lived with most of the identified natural hazards and vulnerabilities and have evolved arrangements to reduce or mitigate the associated risks. Increased levels of development come with reliance on imported materials for structures, electricity and running water for appliances, and imported foods, but this can also decrease the overall resilience.

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).

The Nuku plans carefully identify risk and vulnerabilities, including;

- the groups at high risk (i.e., households with chronic illness, households with young children, households that have disabled people)
- types of housing
- livelihood activities
- risk prone community infrastructure, considering location and building risk

In addition, the plans consider assets that may potentially be at risk, depending on the type of hazard. The most devastating hazards for buildings and infrastructure would be cyclones, tsunami, and storm surge or waves. With rising costs of imported materials, losses to assets could be significant. These warrant investigations of potential insurance schemes to ensure disaster recovery.

The Asset Management Plan (2014) documented the assets of Tokelau. Since 2014, there have been significant developments, including wharves and new vessels for passenger, cargo, and emergencies. The following table, Table 3-3, provides estimated costs in 2019 using both an inflation calculator of NZ dollars and estimated costs of new development.

Table 3-3. Asset Replacement Values for Tokelau.

Assets Description		**Replacement Value 2019**			
Population served		**Atafu**	**Nukunonu**	**Fakaofo**	**Samoa**
Buildings	**Health**	622,239	1,067,072	817,611	
	Education	1,666,448	1,782,299	2,267,085	
	Public & Administration	1,775,551	2,811,483	3,268,117	18,018,343
	Storage Facilities	982,850	541,817	459,291	
	Guest Houses	47,620	186,533	741,936	
	Channels	317,469	317,469	476,203	
	Wharves	6,179,926	6,335,626	12,456,961	
	Seawalls	1,354,534	846,672	1,704,018	

	Solid Waste	11,428	38,100	25,402	
	Hotel	500,000			
	Other	67,652			
	Buildings Subtotal	**13,525,717**	**13,927,071**	**22,216,624**	**18,018,343**
Transport	**Tokelau Samoa link**				34,227,874
	Ship to Shore (Barge)	323,818	201,085	503,797	
	Boats	355,565	286,810	292,117	
	Roads & Streetlights	476,203	450,853	482,629	
	Large Vehicles	250,000	250,000	250,000	
	Bridges	-	222,251	-	
	Transport Subtotal	**1,405,586**	**1,410,999**	**1,528,543**	**34,227,874**
Telcom	**Buildings**	15,873	15,873	307,200	
	Equipment	296,304	174,626	174,626	
		793,672	846,673	899,637	
	Cable	63,494	105,834	201,095	
	Telcom Subtotal	**1,169,343**	**1,143,006**	**1,582,558**	
Energy	**Building**	277,785	293,055	629,640	
	Solar Panels	370,380	317,469	423,291	
	Batteries	1,481,521	1,375,843	1,481,521	
	Inverters	423,291	370,380	497,446	
	Generators	225,403	225,427	225,427	
	Cable		111,126	211,679	
	Fuel	1,905	127,848	91,445	
	Energy Subtotal	**2,780,285**	**2,821,148**	**3,560,449**	
Plant & Equipment		1,463,003	1,179,214	1,814,091	531,493
	P&E Subtotal	**1,463,003**	**1,179,214**	**1,814,091**	**531,493**
AWS	**AWS**		200,000		
	AWS Subtotal		**200,000**		
Other	**Other**	52,959			
	Other Subtotal	**52,959**			
GRAND TOTAL		**20,396,893**	**20,681,438**	**30,702,265**	**52,777,710**
TOTAL ASSET VALUE NZD $ 124,558,306					

Source: Asset Management Plan 2014, 18; Inflationtool.com, "Value of 2014 New Zealand Dollars Today," https://www.inflationtool.com/new-zealand-dollar/2014-to-present-value?amount=13901750.

3.3 Disaster Risk Reduction Actions

The Disaster Risk Reduction actions emerge from considering risk and vulnerability, and identifying solutions to reduce these risks. Best practises and effective management of natural resources and the built environment in many cases contribute to enhancing resilience and therefore reduce risks.

The following list of actions have been identified in the Nuku plans, in addition to other approved and consulted government documents, such as LivC, TNSP, and the Assets Management Plan. During consultations in the Nuku where integrated scenarios were proposed that involved multiple types of risks (e.g. a tropical cyclone results in a vessel

grounding with foreign fishers, oil spill, immigration and health threats, and impacts severe enough to cut off access to Samoa from transport services). By thinking through a number of these combined scenarios, a series of actions and interventions were proposed beyond enacting local disaster plans, and have been included in this list of proposed disaster risk reduction actions.

Table 3-4. Disaster Risk Reduction and Resilience Projects

Proposed Action and Description	Responsible
General - DRR/Response/Resilience	
Atafu - local DMO support to ensure plans are maintained, updated, and exercised	Atafu Taupulega, MiCORE DMU
Nukunonu - local DMO support to ensure plans are maintained, updated, and exercised	Nukunonu Taupulega, MiCORE DMU
Fakaofo - local DMO support to ensure plans are maintained, updated, and exercised	Fakaofo Taupulega, MiCORE DMU
Investigate insurance mechanisms for disaster financing	GoT, MFAT, Taupulega, MICORE DMU
Ensure ongoing public education on DRR and exercise response actions	Nuku VDC, Education, MiCORE DMU
Training by Red Cross Drills by each Village Disaster Committees (VDC).	MiCORE DMU, Nuku VDC, Samoa Red Cross, Health
Identify and maintain “safe houses” (buildings), evacuation routes, and ensure that people are aware of their location and status	Nuku VDC, Taupulega, MiCORE DMU
Initiate, develop and operationalize GIS/ QGIS capacity to store, analyse, verify and simplify data for decisions making for disaster management and risk reduction and recovery purposes.	Statistics/ MiCORE NDMU/ Taupulega Offices.
Critical Facilities and Lifelines	
Develop weather forecasts using AWS data to improve navigation, shipping, storm warnings	EDNRE, MiCORE
Nukunonu Bridge Reconstruction	Nuku Taupulega
Communication Redundancy	TeleTok, Transport, MiCORE DMU
Wharves Improvement	Transport, Nuku Taupulega
Review feasibility engineering assessments (such as Beca 2013) to confirm level of vulnerability of community infrastructure and feasible actions to take.	Nuku Taupulega, GoT
Require energy infrastructure to be designed, located, operated and maintained in ways that minimize hazard risks, as well as the adverse consequences of weather extremes, fires and climate change.	Energy, Nuku Taupulega
Ensure security and protection of boats, essential equipment, and supplies from strong wind and storm surge	Nuku Taupelga & VDC
Support and ongoing maintenance of the village hospital and health facilities for use during emergency	Nuku Taupelga & VDC, Health

Climate and Weather Extremes / LivC	
Ensure that annual and medium-term budgets include climate change and disaster resilient policy and investments	MiCORE, GoT
Integration of climate change and disaster risks intelligence into development planning and decision making is strengthened.	MiCORE
Embed climate change and disaster resilient initiatives, using Integrated approaches, within national and villages' development strategies, social development plans, sector plans, practices and resource mobilization.	MICORE, Nuku Taupulega, GoT
Develop and implement, through inclusive multi-sectoral and multi-stakeholder mechanisms, concrete actions on the ground to ensure the climate change and disaster resilience of key public infrastructures, including communications, transports, roads, water and sanitation, hospitals and schools	Nuku Taupulega, MiCORE, GoT, MoH, Transport, EDNRE,
Restore, upgrade and install new climate and weather monitoring, baseline and weather forecasts and early warning systems, using new AWS data	MiCORE, EDNRE, NZ Met Service
Ensure Climate Resilient and Ready Villages.	MiCORE, Nuku Taupulega, Education
Review and update the Cyclone Contingency Plan, using improved data from AWS and regional Severe Storm programs in the Pacific	MiCORE DMU, EDNRE, Fiji Met Service, NZ Met Service, SPREP
Coastal Inundation and Storm Surge	
Coastal Inundation Project - examine coastal risk and vulnerability; examine state of the seawalls; propose risk reduction measures; implement seawall enhancement (assessment currently underway, but results will occur after finalising this plan).	MiCORE, MFAT, GoT, Taupulega
Prioritise seawall enhancement, beach and shoreline restoration, and other measures recommended from the Coastal Inundation Project underway (currently conducted by Jacobs).	MiCORE, Nuku Taupulega &VDC,
Develop a coastal inundation and storm surge contingency plan that provides evacuation centers & routes.	MiCORE, Nuku Taupulega, VDC & MFAT
Drought Reduction / Water Resource Enhancement	
Improve water capacity to reduce drought impacts	EDNRE, MiCORE, SPC
Develop a Climate Early Warning System (seasonal outlook) - *Island Climate Update*	NZ NIWA, EDNRE, MiCORE DMU
Conduct an updated assessment of drought risk for Tokelau and how it may change under climate change scenarios to assist: 1) Implementation of water resource management recommendations in the Integrated Waste Management, Water and Sanitation	EDNRE, MiCORE, NZ NIWA, SPC

Review and Action Plan, 2) agricultural planning and 3) water resources and agriculture early warning (from LivC)	
Develop a Drought Mitigation and Response Plan	EDNRE, MiCORE DMU, NZ NIWA, SPC
Environmental Monitoring & Services/Food and Water Security & Waste Management	
Identify and develop increased key crop diversity and resilience to rising temperature, rainfall variability, and soil salinity increases.	EDNRE, SPC
Develop and implement a replanting programme in each village of endangered plant species, particularly those of cultural and economic importance including 'Kanava' (Cordia subcordata), 'Puapua' (Guetarda speciose), 'Puka' (Pisconia grandis), and 'Fala' (Pandanua special. variety 'Kiekie')	EDNRE, NZ MPI
Monitor incoming foods for potential pests and invasive species that could harm local food security	EDNRE, Nuku Taupulega
Ensure security and protection of food and water supplies so that there are reserves for use during an emergency	Nuku Taupulega, EDNRE
Ensure individual homes and nuku have sufficient water catchment; roofs have guttering, downpipes are connected to tanks, and tanks are water-proofed and leak proof	Nuku Taupulega, EDNRE
Feasibility report for appropriate environmentally friendly sewer system(s) including treatment and disposal for the villages.	Nuku Taupulega, EDNRE
Commission feasibility and design for acceptable waste disposal facility for three three villages	Nuku Taupulega, EDNRE
Undertake a project to remove the currently bulky waste and waste oil from the atolls, with consideration for implementing a sustainable system of collecting and exporting any future waste of this type	Nuku Taupulega, EDNRE
Further develop recycling operation on the atolls to include glass and plastic recycling	Nuku Taupulega, EDNRE
The purchase of septic tank sludge removal equipment for each Atoll, supported by procedural design, maintenance and training.	Nuku Taupulega, EDNRE
Health-Related	
Finalise Public Health Emergency Contingency Plan (draft 2015), then exercise and maintain the plan.	Health, NDC, Nuku VDC or local health disaster response committees
Monitor and plan for climate-related health risks, such as waterborne disease increase during drought, heat stroke from rising temperatures, vectors for mosquito-based disease	Health, Nuku VDC or local health disaster response committees

Ocean-Related - SAR/Loss at Sea	
Develop and Finalise the Transportation Contingency Plan to deal with transport failures, ship or boat loss at sea, search and rescue, and critical transportation needs (medical evacuations, medical supplies & medicines, etc.). Ensure that the plan considers situations, such as storms or other hazards that may close Apia Harbour and require alternative transportation mechanisms. Develop MOU with other ports, and potentially airdrop services, to maintain continuity of operations in each Nuku.	Transport, Nuku Taupulega, NDC & VDC
Develop a Boat Contingency Plan and provide training. 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. Boating incidents include: boat missing with crew; outboard motor breakdown; boat caught unexpectedly in rough seas; boat capsizes, sinks, or person lost overboard. Risk reduction measures can be identified and training provide to fishers and other boat users.	Transport, Nuku VDC, MiCORE DMU & NDC
Ensure training and consideration of international protocols for Search & Rescue adhering to international treaties such as the International Convention for the Safety of Life at Sea (SOLAS) and the SAR Convention of 1979; in addition to UNOCHA's protocols on INSARAG	Transport, Technical Assistance/Maritime Academy/NZ, UNOCHA, MICORE
Continue ongoing exercise and training of ship crews, especially Fetu o te Moana that is launched as an emergency vessel, and extend training/awareness to passengers. Also ongoing training for aumaga workers who are employers of each Taupulega tasked to work on the barges/ school boats.	Transport, Nuku Taupulega, MiCORE, DMU
Secure resources to combat potential oil spills in each Nuku, with training for dealing with oil spills in ocean and coastal environments.	Transport, Nuku Taupulega, NZ Technical Assistance, EDNRE
Continue to follow fire safety plans for vessels, and share fire safety knowledge with Nuku.	Transport, Nuku VDC
Tsunami	
Review and update the Tsunami Contingency Plan (included in Annex 5).	MiCORE DMU, NDC, VDC
Ensure public awareness about tsunami and evacuation routes.	Nuku VDC, MiCORE DMU, NDC
Ensure that Pacific Tsunami Warning System information will be officially received in each Nuku.	Nuku VDC, MiCORE DMU, NDC
Fire	
Develop a Fire Contingency Plan for each Nuku that considers fires to: houses, schools, hospital, stores,	Nuku Taupulega, Technical Assistance/NZ Fire Service Commission

churches, critical facilities and infrastructure, fuel storage and hazardous materials	
Secure resources for equipment, technical assistance, and appropriate training for each Nuku to deal with potential fires from oil tanks, petrol storage, or other hazardous materials	Nuku Taupulega, MiCORE DMU, Administrator, Technical Assistance/NZ Fire Service Commission
Communications	
Ensure communications equipment can provide alerts, warnings, and information during disasters; ensure communication redundancy in case of failure of any equipment (such as use of Transport communications)	TeleTok, Transport, MiCORE DMU, Nuku Taupulega, GMs
Ensure effective communication systems available to the village including maintenance (battery charging) and testing of satellite phone(s)	Nuku VDC, GMs, TeleTok
Explore use of push alerts using mobile phone system to ensure everyone is informed of emergencies	TeleTok
Risk Financing	
Explore feasibility of insurance schemes to aid in recovery of catastrophic events (especially given extensive development). Schemes such as the World Bank's Pacific Catastrophe, Risk Assessment & Financing Initiative (PACRAFI) may be useful.	Nuku Taupulega, GoT, Finance, MFAT, MiCORE NDMU, Administrator, Technical Assistance
Maintain budget for "unforeseen events." New Zealand expects that Tokelau will first look at its own resources, and wisely spend the recurrent government budget from New Zealand. However, New Zealand stands ready in the case where Disaster Risk Reduction actions and Disaster Response are beyond Tokelau's capacity and capability to manage.	GoT, Finance, Nuku Taupulega
Include the costs of Disaster Risk Reduction into departmental or village budgets and assisting with Disaster Risk Reduction within area of responsibility	OCOG, SMT, GMs

3.5 Plan Maintenance

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. The DRR actions should be reviewed regularly to assess achievements in reducing risks.

4.0 Tokelau Readiness and Communications

4.1 Readiness Arrangement 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/sat mifis.

Activities for Readiness are included in Table 1-1 that identifies roles and responsibilities for the Nuku and government during all phases of the hazard.

4.2 Early Warning Systems

Tokelau has several arrangements for receiving warnings of possible hazard events related to weather extremes, tsunami, and health alerts working with its ministries and SMT to ensure that people are safe. The NDMU coordinates with relevant departments and agencies to ensure that the early warnings are received and that people know what to do with the information. The NDMU has coordinated trainings with Samoa Red Cross and other agencies, which will ensure readiness for dealing with threats.

Severe Weather Warnings

NDMU together with MET currently work closely to put together necessary weather and climate advisories, warnings, and ICU bulletins for the villages and NDC where necessary.

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) - http://samet.gov.ws/index.php/current-warning-page, accessed 20 May 2019
2) the Regional Specialised Meteorological Centre, Nadi, Fiji Meteorological Service - www.met.gov.fj/aifs_prods/10050.txt (accessed 30 April 2019)

These are backed up by:

3) Regional Specialised Meteorological Centre, Wellington, Met Service NZ Ltd (which will be able to provide improved information to Tokelau since the Automated Weather Station (AWS) is operational)

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 (accessed 30 April 2019)

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. Furthermore, an alternative tsunami warning and verification will be provided by the Samoa MET through NDMU.

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 MET team together with NDMU will immediately contact village General Managers, the General Manager and Director of Transport and Support Services, Tokelau Apia Liaison. They then advise the Ulu O Tokelau and the NDC is activated.

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

4.3 Communications
Communications are critical during an emergency or potential disaster. The process involves knowing who specifically to notify and to maintain contact throughout the emergency period for updates. In addition to the contact people, it is important to ensure that the NDMU is notified to maintain a record of the event and to work with the appropriate members of the SMT to ensure that knowledgeable advisors are involved in the decision-making, whether the threat is from human-induced, health, weather extreme, or other hazard.

Given the geographic challenges in maintaining communication among the Nuku in Tokelau, communication operations are critical. This requires responsibility of TeleTok to ensure that communications systems are tested and will support emergencies.

Tokelau Apia Liaison Office: Tokelau Apia Liaison Office (TALO – NDMU, OCOG) 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

Director of Transport for All Vessels: MV Mataliki, MV Kalopaga, and the MV Fetu o te Moana: Satellite Phone; HF Frequency

5.0 Tokelau Response

5.1 Disaster Response

The Coordinated Incident Management System (CIMS) provides a disaster response framework and structure that guides how Tokelau responds to all types of disasters and emergencies. It is flexible and adaptable, while aligning key roles and responsibilities throughout Tokelau.

Each Nuku has a significant response section in their disaster management plans (Atafu/Nukunonu/Fakaofo Disaster Risk Reduction, Response, and Resilience Plans DR4) as most disasters will have localised impacts.

Roles and responsibilities for response efforts are identified in Table 1-1. Key areas in different types of disaster response and ministry aligned with the possible Incident Controller in different types of disasters include the following: Search and Rescue (Ministry of Transport); Boat Loss and Transport Failure (Ministry of Transport); Health (Ministry of Health); Logistics (Ministry of Transport); Critical Facilities and Lifelines (Nuku Taupulega, Health, Transport, Energy, and TeleTok); Education (Ministry of Education; and Early Recovery (Nuku Taupulega). The Incident Controller will likely be members of the Senior Management Team (SMT).

When a disaster affects one Nuku, there will be an incident controller and local command post identified in the Nuku, according to the local plans. The response structure following the Coordinated Incident Management System (CIMS) structure is shown below:

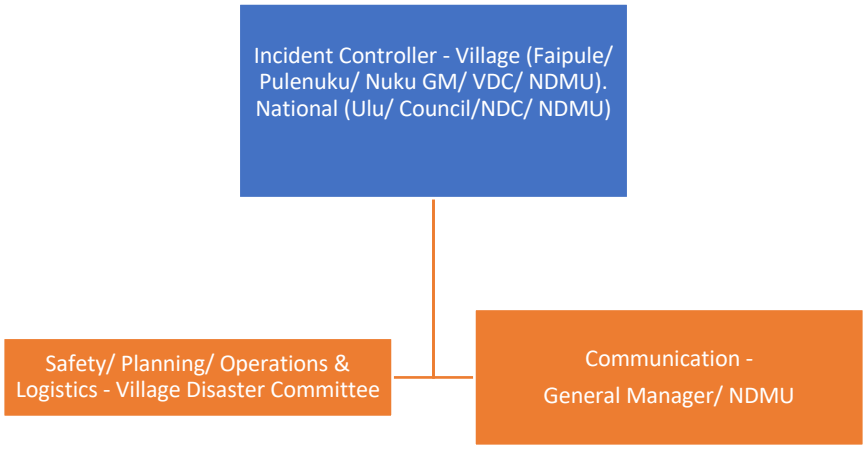

Figure 10: CIM Structure

The Nuku Response Teams are coordinated and will be tasked by the Village Disaster Committee. These teams received training in 2014, but will be revised to adapt the structure to suit the particular hazard and level of hazard and needs of the small population. The teams below will be deployed as the VDC and NDMU see fit. These teams are:

- Warning Team
- Rescue and Evacuation Team
- Shelter Management Team
- Security Team
- Sanitation Team

- First Aid Team
- Damage Assessment Team
- Bodies Team
- Counselling Team
- Relief Team
- Coordination Rehabilitation Team

Should a disaster affect more than one Nuku (such as a tsunami or tropical cyclone), the GoT facilitates disaster response in the affected region with the Incident Controller from the National Disaster Committee, a member of the Senior Management Team, with the technical expertise in the particular disaster. The Incident Controller carries out three functions in close coordination with sub-controllers in each affected Nuku:

1. Coordination:
    - Integrates activities of external, international, humanitarian actors of all government and non-government agencies to provide disaster emergency assistance;
    - Ensures disaster emergency activities will be implemented effectively and efficiently;
    - Coordinates among organisations identified in Table 1-1, with respect to varied roles in multiple types of disasters;
    - Generate necessary geospatial data/ maps and information for short term and long term response and recovery.
    - Manages data and information from multiple agencies;
    - Coordinates use of resources and funds; and,
    - Brings in expertise should cascading disasters happen where several types of response are needed simultaneously.

2. Command (National Disaster Committee):
    - Assigns a Disaster Response Incident Controller;
    - Activates the disaster emergency management command system;
    - Provides facilities to support operations (including aboard ships);
    - Coordinates the participation of media, reviews and ensures accurate reporting and coverage; and,
    - Facilitates Nuku to implement disaster emergency management during disaster.

3. Implementation:
    - Implements disaster emergency management to address causes of disaster and arising adverse impacts disrupting the lives and the livelihood of the people.
    - Conducts rapid assessment of the situation;
    - Monitors evaluation of the implemented tasks;

- Concludes disaster emergency operations and transition to recovery when the condition allows, as indicated by no more threats to lives and no potential of further loss;
- Deactivates operations and agencies; and,
- Prepares transition to recovery by line agencies and local government; and,

5.2 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.

For each nuku, the VDC coordinates and manages all aspects of Recovery and ensures that the NDC is kept informed of progress.

General VDC 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.

The VDC 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*

*in Annex 3***.**) This report is sent to the NDC.

6.0 Implementation, Operational Continuity, and Plan Maintenance

The Tokelau Disaster Risk Reduction, Response, and Resilience Plan (TDR4) will require maintenance and updating as new data becomes available. The plan will be fully reviewed and revised every five years.

As a living document, the plan will consider updated or improved information as the DRR projects are reviewed on an annual basis by the National Disaster Management Unit throughout in collaboration with necessary consultation with necessary villages and Departments. Records of the changes and updates will be recorded with the plan, in the front section of the plan.

The MiCORE NDMU will coordinate the review to ensure that Tokelau takes advantage of opportunities for risk reduction to ensure alignment with other governmental plans that build resilience, sustainable development, best environmental practice, good governance, infrastructure development, and human development.

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Glossary

Aumaga The able bodies (men). The aumaga is responsible for looking after the village and do most of the required labour intensive work in Tokelau society.

Build back better - The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment.

Capacity - The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.

Climate change Changes due to anthropogenic (human-induced) sources in addition to climate variability (UNFCCC definition). This is different from the IPCC definition where it refers to climate changes attributed to both natural climate variability and human-induced climate change.

Climate Resilience The capacity for a social-ecological system to (1) absorb stresses and maintain function in the face of external stresses imposed upon it by climate change and (2) adapt, reorganize, and evolve into more desirable configurations that improve the sustainability of the system, leaving it better prepared for future climate change impacts.

Coordinated Incident Management System (CIMS) - A proactive incident management framework that systematically manages incidents regardless of size, hazard and complexity. Pronounced 'sims'.

Decarbonisation The reduction or removal or carbon dioxide from energy sources. A decarbonised (low-carbon) economy is an economy that has a minimal output of greenhouse gas emissions into the environment biosphere, but specifically refers to the greenhouse gas, carbon dioxide.

Disaster - A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Emergency is sometimes used interchangeably with the term disaster, as, for example, in the context of biological and technological hazards or health emergencies, which, however, can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society.

Disaster management - The organization, planning and application of measures preparing for, responding to and recovering from disasters. Disaster management may not completely avert or eliminate the threats; it focuses on creating and implementing preparedness and other plans to decrease the impact of disasters and "build back better". Failure to create and apply a plan could lead to damage to life, assets and lost revenue.

Disaster risk - The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity. It is important to consider the social and economic contexts in which disaster risks occur and that people do not necessarily share the same perceptions of risk and their underlying risk factors.

Disaster risk reduction- Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

Early warning system- An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.

Evacuation- Moving people and assets temporarily to safer places before, during or after the occurrence of a hazardous event in order to protect them.

Exposure - The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.

Faipule A Government of Tokelau representative on each of the three atolls. The faipules are elected every 3 years during general elections. They are members of the Office of the Government of Tokelau with portfolios (Ministers); the Ulu of Tokelau is a Faipule and is also the Head of Government.

Fatupaepae Women's committee which comprise of those women who have left school. The wife of the faipule is the President assisted by the Pulenuku's wife. However, the elders of the Fatupaepae are accorded the highest respect.

General Fono The General Assembly that makes national decisions for Tokelau after consultation with the village Taupulega (Village Councils). It is also the Legislative National Committee and the National Budget Committee. The numbers of delegates on the General Fono are representative of the population from each of the three villages.

Hazard The potential occurrence of a natural or human-induced physical event that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, and environmental resources.

Impacts The effects on natural and human systems. In this document, the term 'impacts' is used to refer to the effects on natural and human systems of physical events, of disasters, and of climate change.

Inati - The traditional system in Tokelau of sharing resources, which contributes to risk reduction and resilience.

Incident Controller - The officer designated as responsible for the incident (emergency or disaster).

National Disaster Management Unit (NDMU) - The national coordinating and planning office for disaster risk reduction, preparedness, response, recovery, and resilience. This office often becomes the focal point as "controller" or "coordinator" in an emergency.

No regrets policies - Options or actions to reduce greenhouse gas emissions that have negative net costs. Net costs are negative because these options generate direct or indirect benefits, such as those resulting from reductions in market failures, double dividends through revenue recycling and ancillary benefits, large enough to offset the costs of implementing the options.

Pulenuku - The village mayor, who is also a matai in the village, and is elected every 3-years during the General elections. The Pulenuku traditional role is to take the lead in managing the village affairs from the decisions and policies made by the Taupulega (the Village Council).

Preparedness - The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters.

Prevention- Activities and measures to avoid existing and new disaster risks.

Readiness - Readiness means developing operational systems and capabilities before an emergency happens, including self-help and response programmes for the general public, and specific programmes for emergency services, lifeline utilities, and other agencies.

Reconstruction - The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk.

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Annex 1: Emergency Rules for Emergency Management 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.

Annex 2: 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

Annex 3: 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

Annex 4: Cyclone Contingency Plan

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.

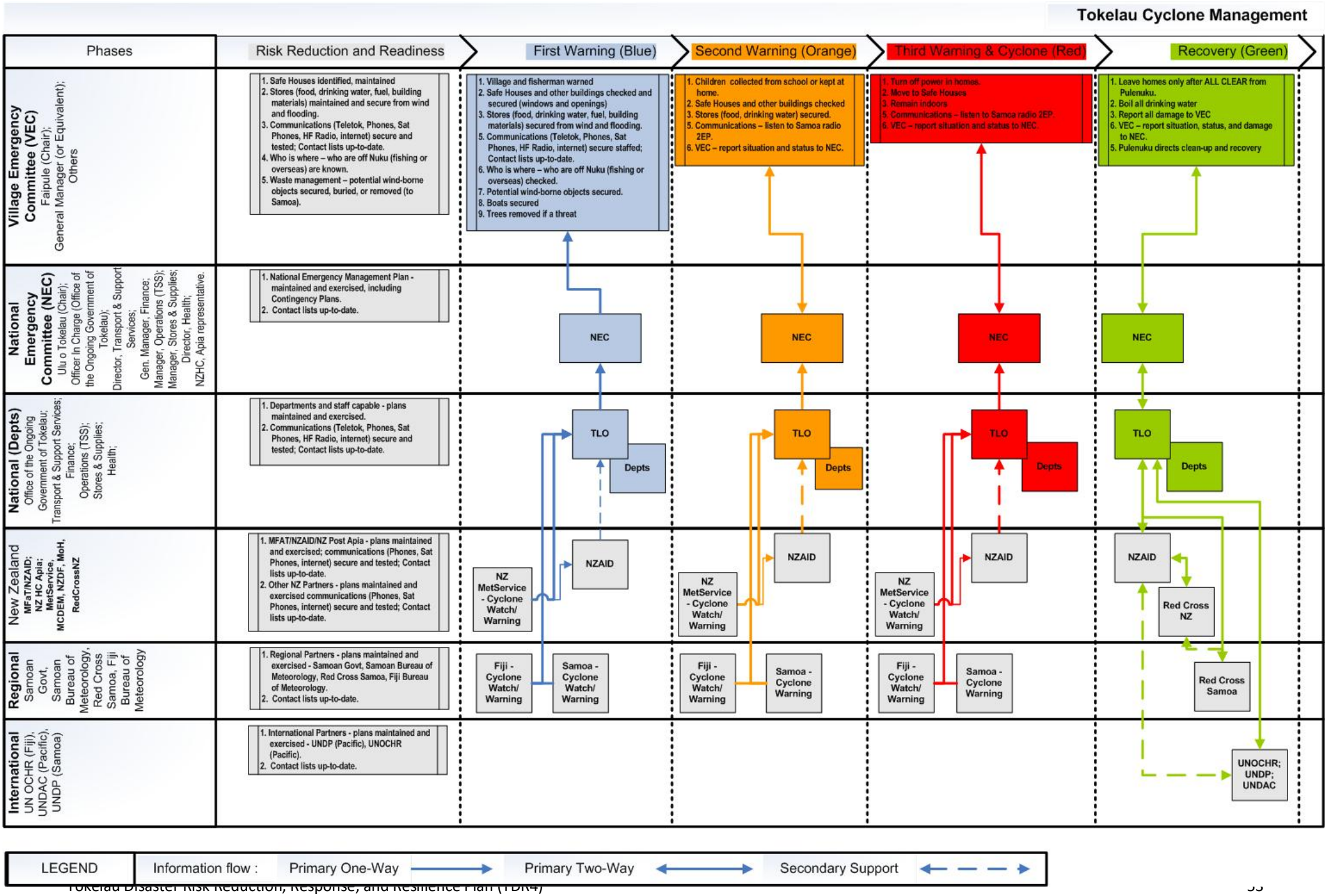
Warning Arrangements

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
Phases
Risk Reduction and Readiness
First Warning (Blue)
Second Warning (Orange)
Third Warning & Cyclone (Red)
Recovery (Green)
Village Emergency Committee (VEC)
Faipule (Chair);
General Manager (or Equivalent);
Others
1. Safe Houses identified, maintained
2. Stores (food, drinking water, fuel, building materials) maintained and secure from wind and flooding.
3. Communications (Teletok, Phones, Sat Phones, HF Radio, internet) secure and tested; Contact lists up-to-date.
4. Who is where – who are off Nuku (fishing or overseas) are known.
5. Waste management – potential wind-borne objects secured, buried, or removed (to Samoa).
1. Village and fisherman warned
2. Safe Houses and other buildings checked and secured (windows and openings)
3. Stores (food, drinking water, fuel, building materials) secured from wind and flooding.
5. Communications (Teletok, Phones, Sat Phones, HF Radio, internet) secure staffed; Contact lists up-to-date.
6. Who is where – who are off Nuku (fishing or overseas) checked.
7. Potential wind-borne objects secured.
8. Boats secured
9. Trees removed if a threat
1. Children collected from school or kept at home.
2. Safe Houses and other buildings checked
3. Stores (food, drinking water) secured.
5. Communications – listen to Samoa radio 2EP.
6. VEC – report situation and status to NEC.
1. Turn off power in homes.
2. Move to Safe Houses
3. Remain indoors
5. Communications – listen to Samoa radio 2EP.
6. VEC – report situation and status to NEC.
1. Leave homes only after ALL CLEAR from Pulenuku.
2. Boil all drinking water
3. Report all damage to VEC
6. VEC – report situation, status, and damage to NEC.
5. Pulenuku directs clean-up and recovery
National Emergency Committee (NEC)
Ulu o Tokelau (Chair);
Officer In Charge (Office of the Ongoing Government of Tokelau);
Director, Transport & Support Services;
Gen. Manager, Finance;
Manager, Operations (TSS);
Manager, Stores & Supplies;
Director, Health;
NZHC, Apia representative.
1. National Emergency Management Plan - maintained and exercised, including Contingency Plans.
2. Contact lists up-to-date.
NEC
NEC
NEC
NEC
National (Depts)
Office of the Ongoing Government of Tokelau;
Transport & Support Services;
Finance;
Operations (TSS);
Stores & Supplies;
Health;
1. Departments and staff capable - plans maintained and exercised.
2. Communications (Teletok, Phones, Sat Phones, HF Radio, internet) secure and tested; Contact lists up-to-date.
TLO
Depts
TLO
Depts
TLO
Depts
TLO
Depts
New Zealand
MFaT/NZAID;
NZ HC Apia;
MetService,
MCDEM, NZDF, MoH,
RedCrossNZ
1. MFAT/NZAID/NZ Post Apia - plans maintained and exercised; communications (Phones, Sat Phones, internet) secure and tested; Contact lists up-to-date.
2. Other NZ Partners - plans maintained and exercised communications (Phones, Sat Phones, internet) secure and tested; Contact lists up-to-date.
NZ MetService - Cyclone Watch/ Warning
NZAID
NZ MetService - Cyclone Watch/ Warning
NZAID
NZ MetService - Cyclone Watch/ Warning
NZAID
NZAID
Red Cross NZ
Red Cross Samoa
Regional
Samoan Govt, Samoan Bureau of Meteorology, Red Cross Samoa, Fiji Bureau of Meteorology
1. Regional Partners - plans maintained and exercised - Samoan Govt, Samoan Bureau of Meteorology, Red Cross Samoa, Fiji Bureau of Meteorology.
2. Contact lists up-to-date.
Fiji - Cyclone Watch/ Warning
Samoa - Cyclone Watch/ Warning
Fiji - Cyclone Watch/ Warning
Samoa - Cyclone Warning
Fiji - Cyclone Watch/ Warning
Samoa - Cyclone Warning
International
UN OCHR (Fiji), UNDAC (Pacific), UNDP (Samoa)
1. International Partners - plans maintained and exercised - UNDP (Pacific), UNOCHR (Pacific).
2. Contact lists up-to-date.
UNOCHR; UNDP; UNDAC
LEGEND
Information flow :
Primary One-Way
Primary Two-Way
Secondary Support

Annex 5: Tsunami Contingency Plan

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.

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. The tsunami in Samoa left 12 minutes for evacuation and depending on the source of the tsunami, there be minutes to several 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