

# MANGAIA ISLAND



## DISASTER RISK MANAGEMENT PLAN 2023 – 2025

*(To be Reviewed February 2025)*

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## 1. INTRODUCTION

During post Tropical Cyclone devastation in 2005, the Cook Islands Government found that a more proactive approach to Disasters in the Cook Islands was required. Emergency Management Cook Islands (EMCI) was formed as a division within the Office of the Prime Minister and tasked with strengthening communities in disaster awareness, prevention, preparedness, mitigation, response and recovery programmes and activities.

These efforts are aimed towards the achievement of Goal 13 of the Cook Islands National Sustainable Development Plan (NSDP) which intends to develop “**Strengthen resilience to combat the impacts of climate change and natural disasters**” throughout the Cook Islands. The actions outlined in this document are guidelines designed to assist agencies, organisations, Mangaia Island Disaster Risk Management Committee, Mangaia Island Disaster Coordinator, the Mayor and the Island Council.

## 2. MANGAIA ISLAND PROFILE

A’ua’u is the ancient name of the island of Mangaia and is the second largest and most southerly of the Cook Islands. It is a volcanic island rising to 169 meters above sea level and surrounded by sharp coralline rock (makatea) cliffs of up to 80 meters. Beyond the cliffs are rolling hills of red volcanic soils, amongst which are swamps used for taro production and natural fresh water lakes.

The population of Mangaia has fallen continuously since 1971 and by 2001, the population had fallen to 739 nearly a third of the population. The current estimated population is around 470, almost a quarter of its population now remains on the island since 1971.

Refer to Mangaia Islands Profile for more information - [http://www.emci.gov.ck/?page\\_id=90](http://www.emci.gov.ck/?page_id=90)

Population								
1971	1981	1991	1996	2001	2016	2019	2023	2024
2081	1364	1214	1108	572	499	494	473	470

*Source: Statistics & EMCI GEO Portal*

### 3. DISASTER RISK MANAGEMENT CYCLE

Figure 1 highlights the full cycle for Disaster Risk Management from preparedness to reconstruction instead of the traditional practices of focusing on disaster response only. While some hazards cannot be stopped, some can be prevented or at least minimize the impact it can have on people’s lives and property.

FIGURE 1



#### 4. MANDATE: DISASTER RISK MANAGEMENT ACT 2007

To assist EMCI in achieving this task the Disaster Risk Management Act 2007 was enacted and refers to all hazards both natural and people made. The DRM Act 2007 replaced the outdated Hurricane Safety Act 1973 which only addressed hurricanes.

Pursuant to Section 15 of the Disaster Risk Management Act 2007:

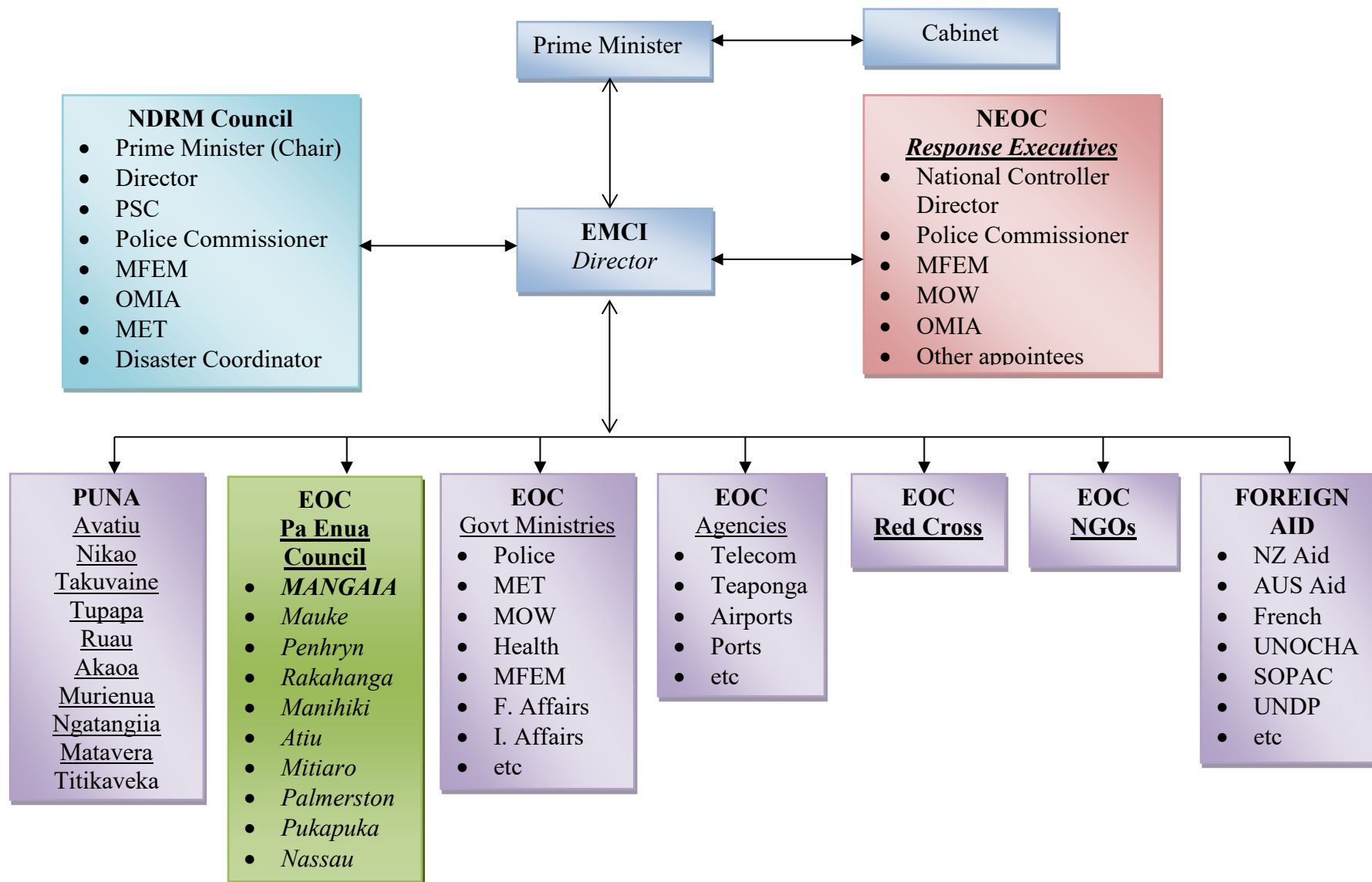
- a) Each Island Council shall establish a Disaster Risk Management Committee.
- b) The Mayor of the Council shall chair the Committee.
- c) Each Island Council shall, after consulting with the Director, appoint four other suitably experienced or qualified members to the Committee.
- d) Each Island Council shall, in consultation with the Director, appoint a Disaster Coordinator to implement a Disaster Risk Management Plan, and to coordinate resources to be used in Response and Recovery in his area of responsibility.
- e) The Committee will prepare and maintain a Disaster Risk Management Plan for its area of responsibility.
- f) Each Disaster Risk Management Plan shall:
  - specify the mitigation strategies to be adopted to reduce the risks of a Disaster and Emergency;
  - identify resources available for use for Disaster Risk Reduction and Emergency Management; and
  - Specify how such resources are to be used.
- g) The Committee shall cooperate with all other Committees established under this Act.

If an event occurs in the Outer Islands, the Disaster Controller has the powers of the National Controller for that area of responsibility.

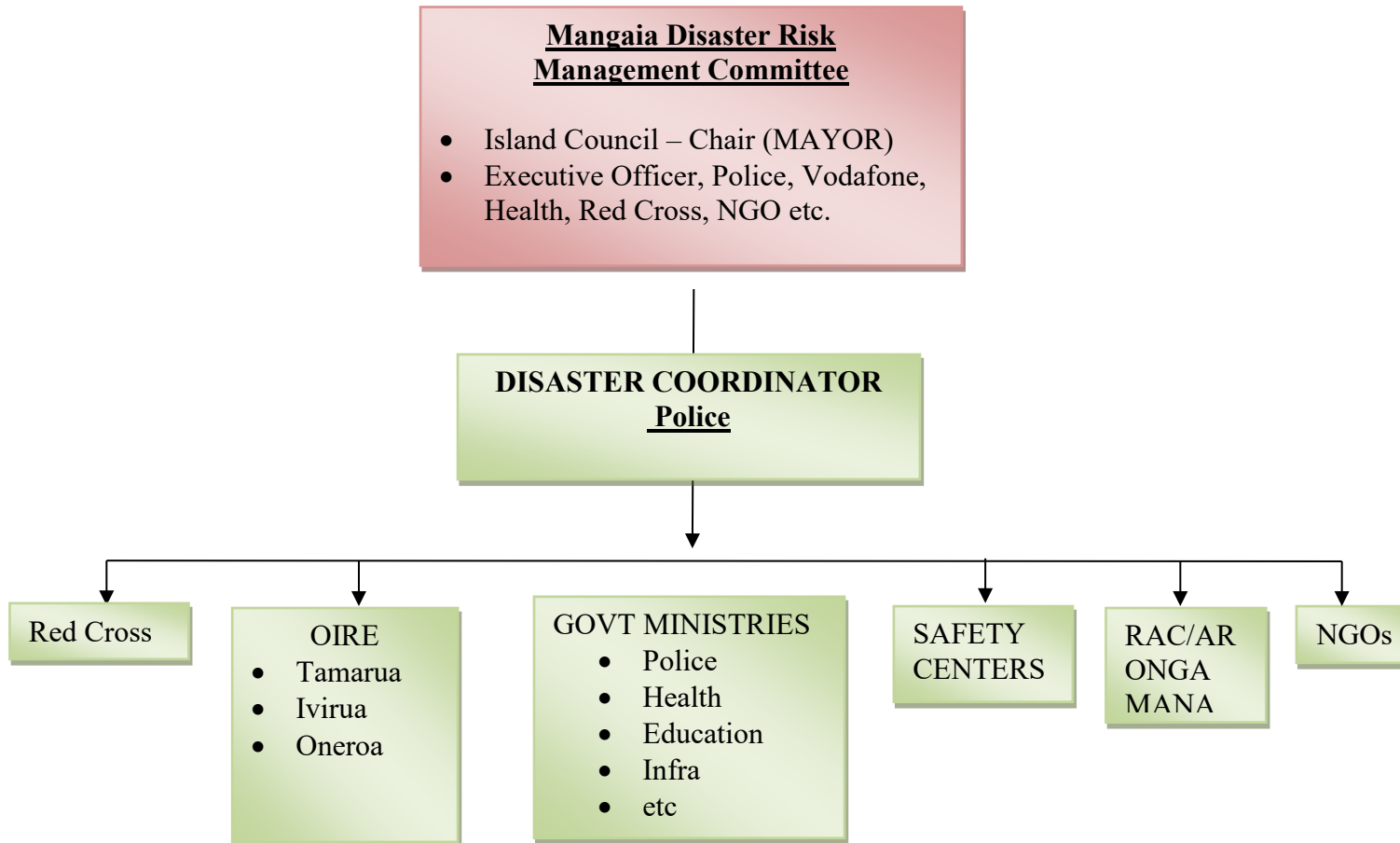
#### 5. NATIONAL EMERGENCY MANAGEMENT CONTACT LIST

<b>MINISTRY:</b>	<b>PHONE:</b>	<b>MOBILE:</b>
<b>Emergency Management Cook Islands (EMCI)</b>	29 609 - 29 601	54 005
<b>National Emergency Operation Center (NEOC)</b>	22 261 - 22 262 - 22 263	
<b>Police Headquarters - Rarotonga</b>	22 499 - 999	
<b>MET Office – Rarotonga</b>	20 603 - 25920	
<b>Office of the Prime Minister</b>	23 900 - 25 494	

## 6. NATIONAL DRM STRUCTURE



## 7. MANGAIA DISASTER RISK MANAGEMENT STRUCTURE



## 8. COMMUNICATION FLOW DIAGRAM

### BULLETIN ONLY

### COOK ISLANDS METEOROLOGICAL SERVICE

ALL KEY STAKEHOLDERS

(Register contact with CIMS (radio, emails, text, sms, website, social media))

1. CIMS informs DC on weather bulletin.
2. DC responds with current situation on the island
3. DC activates island EOC

### DECLARATION OF EMERGENCY/DISASTER

**NEOC (National Controller - Rarotonga)**



**DISASTER CO-ORDINATOR - MAYOR (Designate to Police)**



4. DC calls meeting of DRMC
5. Weather warning issued to council
6. Preparatory measures discussed
7. Agencies disperse to inform their respective sectors/communities

**EOC ACTIVATED**

POLICE    INFRA    PUBLIC UTILITY    HEALTH    EDUCATION    AGRICULTURE    ISLAND COUNCIL    Vodafone    INTERNAL AFFAIRS    RED CROSS

*DISASTER STRIKES*



8. Community informed, prepared & ready

**PEOPLE**

**STAND DOWN FROM DC – RESPONSE OPERATIONS BEGIN**

If an event occurs in the Outer Islands and circumstances diminish or prevent the NC from effectively performing his functions, then the DC can exercise the powers of the National Controller for that area of responsibility.



## 9. DISASTER ASSESSMENTS

It is expected that each sector will be responsible for doing their own assessment to help quicken the process. The quicker the assessment the quicker the early response from Rarotonga

Agency Responsible	Area
Island Administration	Infrastructure, Energy, Residential Properties
Police	Law & Order
Health	Hospitals and Casualties
Education	Students, Teachers and School Property
Vodafone	Communications
Red Cross	Wider Community
Agriculture	Food Security
Island Council Members	Villages

### Immediate Situation Overview (ISO)

This assessment is to be carried out by all sectors (Infrastructure, Health, Education, CIIC, Vodafone, Energy etc.) Ideally the ISO is conducted within the first 8 –12 hours or immediately after a disaster and provides general overview;

- Loss of lives or displacement of people?
- Damage to properties and infrastructure (roads, airport etc.)?
- Water, food and shelter?

### Initial Damage Assessment (IDA) (to be carried out by all sectors)

Ideally the IDA is carried out within the first 48 hours after a disaster and provides further information about the level and extent of damage in each sector. The IDA information is used to determine;

- priority needs
- assistance required
- a preliminary estimate of the cost of damages in the country (food, water, shelter, housing, clothing, access, etc)
- urgency for an IDA is critical to activate an immediate response with the right kind of supply and service required

### Detailed Sector Assessment (DSA) (to be carried out by specialist within each sector)

The DSA is a much more detailed assessment following up from the ISO and IDA. This is normally carried out by technical (TA) experts or specialist from each sector to provide detailed sector-specific information for purposes of planning and funding of recovery, reconstruction and rehabilitation in each sector. Ideally this should be completed within 2 weeks to provide information for

## 10. ROLE OF THE DISASTER RISK MANAGEMENT COMMITTEE

The role of the **Mangaia Disaster Risk Management Committee** is to:

- Ensure an effective Disaster Risk Management Plan is in place
- Disseminate information of prevention, mitigation, preparedness, response, rehabilitation and reconstruction to each village.
- Nominate appropriate premises as evacuation centers.
- Appoint suitable person(s) as evacuation center manager(s).
- Assist BlueSky Officer ensures communication link is established village to village, island to Rarotonga (if variables do not permit established communication with Rarotonga, an alternate island should be selected).
- Assist Meteorological Service ensure accurate weather data and reports are maintained and distributed to each village, surrounding islands, other islands which the branch serves and the National Emergency Operations Center.

## 11. DISASTER COORDINATOR'S ROLE

The Disaster Coordinator shall;

- Comply with direction(s) received from the National Controller Officer (Police Commissioner)
- Determine the priority of the Response roles of any Agencies, in consultation with the Disaster Risk Management Committee
- Direct and coordinate the activities of the various Agencies
- Determine priority, responsibility and roles of each Emergency Services Agencies
- Provide regular situation reports (or damage assessment(s) to the NEOC and the National Controller
- When the Island EOC is activated, assign skilled staff at center with such roles as;
  - Telephone communicator (s), Radio Operator (s), Log keeper (s)

## 12. EMERGENCY OPERATIONS CENTRE (EOC)

The National DRM Plan states that each Pa Enua will identify a location to be used as an Island Emergency Operations Centre (EOC) to coordinate response and recovery activities. Contact details for each center are to be passed to EMCI so that they can be recorded in the NEOC.

<b>LOCATION:</b>	Island Administration Office
	<i>Before disaster makes landfall, the EOC will re-locate to Television and Vodafone premises.</i>
<b>ACTIVATION:</b>	State of Emergency or Disaster declared by the Prime Minister.
<b>RESPONSIBLE:</b>	Disaster Coordinator (Police)
<b>FUNCTION:</b>	Central Point of control, coordination and communication during a disaster
<b>ROLES:</b>	Mangaia Disaster Risk Management Committee
	When the Island EOC is activated, assign skilled staff at center with such roles as; Telephone communicator (s), Radio Operator (s), Log keeper (s)
<b>RESOURCES</b>	Each EOC is to provide maps, clipboards, pencils, pens, whiteboard, whiteboard markers, Logbooks,
<b>Assessment Forms</b>	Immediate Situation Overview (ISO) Initial Damage Assessment (IDA) Detailed Sector Assessment (DSA) <i>(to be carried out by all sectors)</i>

### 13. RESPONSIBILITIES FOR GOVERNMENT MINISTRIES & AGENCIES

ROLES	RESPONSIBILITIES FOR - ALL HAZARDS
<b>MAYOR</b>	<b>Makitua Tutai</b>
<b>MAYOR</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Coordinate the inspection of their respective village(s) and determine appropriate prevention, mitigation and preparedness activities to be carried out throughout the year.</li> <li>• Provide advice to DRMC of activities carried out throughout the year, and during a disaster advise the Disaster Coordinator and MANGAIA EOC of available resources for possible deployment if necessary.</li> <li>• Manage the EOC and <b>MANGAIA CONTROL GROUP</b> (MCG) operations</li> <li>• Maintain a population count of each village by household.</li> <li>• Distribute disaster information and assistance to village community.</li> </ul>
	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>• Work closely with the DRMC concerning all disaster management related activities</li> </ul>
	<p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>• <b>Same as above</b></li> </ul>
	<p><b>HAZARD – <u>Bush Fires</u></b>  <b>HAZARD – <u>Drought</u></b></p> <ul style="list-style-type: none"> <li>• <b>Coordinate the operations according to the DRM Plan (Annex 1)</b></li> </ul>
<b>EXECUTIVE OFFICER</b>	<b>ANTHONY WHYTE</b>
	<ul style="list-style-type: none"> <li>• All Island Admin Employees to assemble at the office of the Island Administration/Secretary during a disaster for briefing</li> <li>• Supervisors are to ensure each employee under his/her responsibility must be made aware of the requirements</li> <li>• A head count if required for those present must be carried out by Supervisors</li> <li>• The directives of the Executive Officer on behalf of the EOC/MCG be exercised to avoid any confusion</li> <li>• The provision of assistances or any requirements from the EOC/MCG will be dispersed by the Executive Officer and must be attended unless under difficult circumstance</li> <li>• Executive Officer is to direct the movement of Personnel, however, Supervisors may at time be responsible for this task</li> <li>• Effective communication must be maintained <b>effectively</b> during this period</li> <li>• All sectors must make it possible to provide assistance/s at any time, and the Administration must be able to provide stand/by resources to carry-out necessary works and needs</li> <li>• The Executive Officer may at times delegate the authority to a senior officer for the disposals of his duties when he is not available</li> <li>• During all clear, an assessment team should be dispatched to carry out survey, refer to annex Damage Assessment.</li> <li>• Report(s) and log(s) are to be handed to the Executive Officer to compile and submit to EOC/MCG (if the EOC/MCG is no longer operational, the report(s) and log(s) should be submitted to the Disaster Coordinator).</li> </ul>



<b>EXECUTIVE OFFICER</b>	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>• Mobilize chain of command</li> <li>• Inform HODs</li> <li>• Plan of attack</li> <li>• DMT</li> <li>• Deploy equipment &amp; manpower</li> <li>• Notify public and relevant agencies</li> <li>• Red Cross- Standby for assistance</li> <li>• First Aid, Tarps, etc. Emergency Bins</li> <li>• Adjust Resources as needed</li> </ul>
	<p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>• Access Damage</li> <li>• Feedback of all involved</li> <li>• Debrief</li> <li>• How to improve for the next time</li> <li>• Red Cross – report on assistance, equipment sends to H.Q</li> </ul>
<b>ISLAND ADMIN</b>	<b>ANTHONY WHITE</b>
<b>ISLAND ADMIN</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Senior Administration Officer/Finance Officer must ensure proper recording procedures are set and abided for all Documents, computers, Admin assets etc.</li> <li>• All documents, computers, assets etc. be transferred to Energy office or close-by buildings for safe keeping during a disaster.</li> <li>• Staffs must ensure nothing of whatsoever is discharged separately from the others.</li> <li>• The assistances of other employees from other division must be sought for the proper transfer of all assets from the Admin.</li> <li>• The safe storage of all assets, documents, computers etc. must be a priority.</li> </ul>
	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>• Administration staffs are to report to work when required during a disaster.</li> </ul>
	<p><b>Recovery</b></p> <p>Replace standard resources</p>
<b>POLICE</b>	<b>AERENGA MATAPO</b>
<b>POLICE</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Raise awareness amongst communities</li> </ul>
	<p><b>Response</b></p> <p>A police officer on duty in or near an event may exercise the following powers:</p> <ul style="list-style-type: none"> <li>• cause to be closed any road, footpath or open space otherwise providing access to the Area.</li> <li>• prohibit any person or vehicle from entering or passing through the Area.</li> <li>• direct any person on any road or footpath or in any other open space or any vehicle on any road or footpath or any open space within the Area to immediately leave the Area by the safest and shortest route.</li> <li>• During a disaster, the Police shall provide administrative and logistical support as directed by the Disaster Controller or in his absence the replacement.</li> </ul>
	<p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>• Normal duties</li> </ul>

<b>HEALTH</b>	<b>MAMATIARE GEORGE (Medical Officer)</b>
<b>HEALTH</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Have sufficient staff and equipment available to adequately provide medical assistance at either the health facility or at the evacuation center(s), which require medical assistance (and as directed by Disaster Controller and EOC).</li> <li>• Ensure that there is a designated medical staff for each Safety Centre.</li> <li>• Provide EOC with regular situation reports on the number and extent of casualties during the disaster.</li> <li>• Immediately after the disaster, provide an assessment of casualties and the like to Disaster Controller.</li> </ul>
	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>• Attend to all casualties admitted to hospital</li> <li>• Advise Rarotonga Hospital</li> </ul>
	<p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>• Report to Rarotonga Hospital and re-stock if required.</li> </ul>
<b>INFRASTRUCTURE</b>	<b>NOOROA SAMUELA JNR</b>
<b>INFRASTRUCTURE</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Building and Infrastructure staff must ensure Government properties are secured</li> <li>• Mechanical &amp; Heavy Plant Divisions are to ensure machineries are available when required by the EOC/MCG and other Divisions during a disaster. An inspection Team must be organized to ensure access (roads) are made clear to all residential areas including that to the School compound and those residents beyond the populated residential area.</li> <li>• Water works Division must ensure the water system is accessed freely to those Centers providing shelter to the community</li> <li>• Disposing areas (rubbish, toilets,) must thoroughly be checked to avoid contamination and ensure hygiene level is maintained</li> </ul>
	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>• All employees must report to the Island Administration Office when advised by Executive Officer.</li> <li>• Working Teams allocated to assist community and EOC/MCG must abide with instructions directed to them (by The Executive Officer or respective Supervisors) and report back, when necessary, what been carried out and what to be done next.</li> <li>• Supervisors are required to ensure the information are of genuine nature.</li> <li>• Any urgent needs must be reported to the Executive Officer or the Supervisor on site and must be attended without delay, unless this cannot be done so for lack of materials or the work required is too dangerous in such circumstances but still remains to be done so later</li> <li>• Provide transport requirements as maybe directed by the Executive Officer on behalf of the EOC/MCG.</li> <li>• Work party moves to severely damaged areas and conduct temporary remedial works (however, the safety of the work-party should not be compromised, should the work-party “on-site” supervisor deem an area unsafe despite directives from the EOC/ACG).</li> </ul>

	<ul style="list-style-type: none"> <li>Supervisors are required to ensure all employees report back to the Island Admin Office before dismissing each time their service is no longer required.</li> </ul>
	<p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>Carry out all recovery action plans as directed by the EO.</li> </ul>
<b>PUBLIC UTILITY</b>	<b>MATA HERMAN</b>
<b>PUBLIC UTILITY</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>Senior Operator and operators must ensure diesel fuel, oil and the necessary spare parts are available and stored to ensure the continuous supply of electricity during a disaster</li> <li>must ensure to check all electrical connections, light, outlet sockets electrical equipment, appliance whether fixed or portable and other necessary electrical installation before any person/persons are evacuated into safety centers to ensure the safe use of these product are safe for the community</li> <li>electricity is to be disconnected under such circumstances where it is health hazard and threatening both life and property</li> </ul> <p><b>Response</b></p> <ul style="list-style-type: none"> <li>Energy staffs must report to the Island Administration Office during a disaster</li> <li>Visual inspections must be maintained during a short periodic interval to ensure all Pillar Boxes are safe from any damages, and the same as to the Over-Head/aerial lines</li> <li>Electricity to damaged building must be disconnected and either restored temporary if required or permanently isolate for safety reasons, and must be reported to both the owner and the Executive Officer who Acts as the Acting Officer in Charge</li> <li>Ensure, the public does not interfere with any electrical connection, or lines at anytime</li> <li>Necessary precautions must be undertaken to ensure, safety to life, property and equipment's are prioritized at all times</li> <li>Maintain power supply to essential areas where required</li> <li>Compile a report to the Office of the Executive Officer after a disaster</li> </ul> <p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>Restore all power lines and all required services as per assessment and as directed by the EO.</li> </ul>
<b>Vodafone</b>	<b>ALICE TANGITAMAITI</b>
<b>Vodafone</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>Ensure an efficient communication link is established village to village, island to Rarotonga (if variables do not permit established communication with Rarotonga, an alternate island should be selected).</li> <li>Upon notification of a Hurricane Alert for the island, Install HF Radio Transceiver is to be set-up and made operational. Contact is to be made with Rarotonga Radio on 3162 KHz.</li> </ul> <p><b>Response</b></p> <ul style="list-style-type: none"> <li>SATLITE PHONE is made available to EOC in case of break down communications</li> <li>In the event that wind speed exceeds 45 mph steady or 65 mph gusting, the antenna should be driven to stow position by driving up in elevation to zenith (stowed). This will be done after advising Rarotonga Vodafone, Disaster Controller and EOC of impending stow or of any faults that may occur. Return to operating position once wind speeds have decreased below 45 mph steady. Separate instructions for Vodafone Rarotonga will issue the "Stow" procedures.</li> </ul>

	<ul style="list-style-type: none"> <li>• Maintain contact with Rarotonga Radio on 3162 KHz until the satellite earth station antenna has been restored to the normal operating position and communications with Rarotonga via the satellite has been re-established.</li> <li>• Action all requests for communications from EOC.</li> <li>• Establish radio, telephone emergency calling facilities if required.</li> <li>• Provide a damage assessment of communication system to Disaster Controller (if necessary)</li> </ul>
	<p><b><u>Recovery</u></b></p> <ul style="list-style-type: none"> <li>• Ensure facilities and equipment are safe and restored immediately if required</li> </ul>
<b>AGRICULTURE</b>	<b>NUKU KOROA</b>
<b>AGRICULTURE</b>	<p><b><u>Preparedness</u></b></p> <ul style="list-style-type: none"> <li>• Ensure a contingency plan is in place. Refer to Ministry plans.</li> <li>• Advise growers on best crops to plant for the right season</li> </ul>
	<p><b><u>Response</u></b></p> <ul style="list-style-type: none"> <li>• After a disaster, staffs be able to carry-out inspections of the Islands agricultural activities assess damage to crops if any</li> <li>• Reports must be compiled and submitted to the Office of the Executive Officer after the disaster.</li> </ul>
	<p><b><u>Recovery</u></b></p> <ul style="list-style-type: none"> <li>• Assist the island with advice on re-planting etc.</li> <li>• The type of fast-food crops for an early recovery and food security</li> </ul>
<b>SOCIAL WELFARE</b>	<b>RURU TANGATAKINO</b>
<i>(Disability &amp; Elderly)</i>	<p><b><u>Preparedness</u></b></p> <ul style="list-style-type: none"> <li>• Advise families of disabilities of best practices of keeping safe during the cyclone seasons.</li> <li>• Provide a list of all the elderly and disabilities on the island</li> <li>• All the homes of these elderly and disabilities to be plotted on the map</li> </ul>
<b>SOCIAL WELFARE</b>	<p><b><u>Response</u></b></p> <ul style="list-style-type: none"> <li>• Evacuate disabilities to centers if there is a need.</li> </ul>
	<p><b><u>Recovery</u></b></p> <ul style="list-style-type: none"> <li>• Resettle disabilities into their homes once assessment is completed</li> </ul>
<b>MARINE</b>	<b>TUARONGA MATEPI</b>
<b>MARINE</b>	<p><b><u>Preparedness</u></b></p> <ul style="list-style-type: none"> <li>• List of fishermen on the island with motor boats</li> <li>• Identify and marine hazards</li> </ul>
	<p><b><u>Response</u></b></p> <ul style="list-style-type: none"> <li>• Marine Officer is to combine with the infrastructure workforce and may take active roles within the Supervision of part of the workforce when directed</li> <li>• After a disaster, may be required to submit a report to the Executive Officer (dependable)</li> <li>• Be available for any sea search if required</li> </ul>
	<p><b><u>Recovery</u></b></p> <ul style="list-style-type: none"> <li>• Assist with the recovery as required by the EO</li> </ul>



<b>EDUCATION</b>	<b>MICHAEL PAPATUA</b>
<b>EDUCATION</b>	<p><b>Preparedness:</b></p> <ul style="list-style-type: none"> <li>• Ensure the Teachers Disaster Risk Management Resource kit is being taught in the classroom as part of their preparedness program in school</li> <li>• Ensure all equipment are stored and secured</li> </ul>
	<p><b>Response:</b></p> <ul style="list-style-type: none"> <li>• If no instruction is received from the Ministry of Education in Rarotonga, the principal to seek advice of the Mayor to close the school</li> <li>• Ensure all students are safe</li> <li>• Provide a report to the EOC of any concerns</li> </ul>
	<p><b>Recovery:</b></p> <ul style="list-style-type: none"> <li>• Provide a detailed report of any damage to the school</li> </ul>
<b>RED CROSS</b>	<b>METUA VAIIMENE / MARILYN NOOROA</b>
<b>RED CROSS</b>	<p><b>Preparedness:</b></p> <ul style="list-style-type: none"> <li>• Ensure first aid training is conducted on a regular basis (this activity may only be undertaken pending funding resources).</li> <li>• Check pre-positioned stock are in good condition</li> <li>• Advise Disaster Coordinator and EOC/MCG of available supplies</li> <li>• Response team are updated &amp; trained before the cyclone season</li> <li>• Ensure satellite phone is working &amp; charged</li> </ul>
	<p><b>Response:</b></p> <ul style="list-style-type: none"> <li>• When all clear is given carry out rapid overview assessment followed by household needs assessment</li> <li>• Distribute relief items</li> <li>• Send in Situation Report to island EOC.</li> </ul>
	<p><b>Recovery:</b></p> <ul style="list-style-type: none"> <li>• Re-visit beneficiaries to see if more help needed.</li> <li>• Assist in other areas as directed by the EO.</li> <li>• If funds available assist Island Government with recovery efforts.</li> </ul>

#### 14. RESPONSIBILITIES OF NON-GOVERNMENT ORGANISATIONS

<b>VILLAGE LEADERS</b>	<b>ONEROA, IVIRUA, TAMARUA</b>
<b>PUNA LEADERS</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Work closely with the Mayor and the DRMC concerning all disaster management related activities</li> </ul>
	<p><b>Response:</b></p> <ul style="list-style-type: none"> <li>• Assist the Mayor and the DRMC in coordinating the operation in their villages during an event</li> <li>• Report to the Mayor and the DRMC of any damages in the village during an event.</li> </ul>
	<p><b>Recovery:</b></p> <ul style="list-style-type: none"> <li>• Assist with the recovery as required</li> </ul>
<p><b>UNIFORMED ORGANISATION</b></p> <p>BOYS BRIGADE GIRL GUIDES GIRLS BRIGADE YOUTH OTHERS</p>	<p><b>ALL HAZARDS</b></p> <ul style="list-style-type: none"> <li>• Advise Disaster Controller and EOC/MCG of available resources including personnel for deployment (if necessary).</li> <li>• Assist PIA work party and/or undertake small-scale remedial work thereby availing PIA work party to other jobs.</li> <li>• Assist with search and rescue (if required under direction from Disaster Controller).</li> <li>• Attend to other requests forthcoming from Disaster Controller.</li> </ul>

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<b>ROLE:</b>	<b>NAME:</b>	<b>WORK:</b>	<b>HOME:</b>	<b>MOBILE:</b>	<b>EMAIL:</b>
<b>Disaster Coordinator</b>	Senior Police Officer	34 287		78 579	tmatapo19@gmail.com
<b>Executive Officer - Infrastructure Energy</b>	Anthony Whyte Nooroa Samuela Mata Herman	34 289 34 047 34 044	34 299 34272 34149	76 397 52377 72681	<a href="mailto:miadmin@mangaia.net.ck">miadmin@mangaia.net.ck</a> <a href="mailto:anthony.whyte@cookislands.gov.ck">anthony.whyte@cookislands.gov.ck</a> <a href="mailto:mata.herman@cookislands.gov.ck">mata.herman@cookislands.gov.ck</a> <a href="mailto:noo.samuela@cookislands.gov.ck">noo.samuela@cookislands.gov.ck</a> njnrsamuela@gmail.com
<b>Health</b>	Mamatiare George	34 027		73 028	mamatiare.george@cookislands.gov.ck
<b>Agriculture</b>	Nuku Koroa	34289	34337		<a href="mailto:nuku.koroa@cookislands.gov.ck">nuku.koroa@cookislands.gov.ck</a> nuku.koroa@gmail.com
<b>Red Cross</b>	Metua Vaiimene Marilyn Nooroa	34283 34055		55806 75667	<a href="mailto:metzs111@gmail.com">metzs111@gmail.com</a> marilynnooroa@gmail.com
<b>RAC – Mission House</b>	Rev. Terepai Kauvarevai	34158			terepai3048@hotmail.com
<b>Education</b>	Michael Papatua	34022			principal@mangaia.edu.ck
<b>Vodafone</b>	Alice Tangitamaiti	34 680		55 481	atangitamaiti@vodafone.co.ck
<b>Private Shop</b>	P&B Aberahama	34092			liz.tiro@gmail.com
	Aratane Toa	34117			aratanetoea@gmail.com
	Ariki Creations	34396			Office.Secretary@mangaia.edu.ck
	Kaumata Trading				ngametua.pokino@gmail.com

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	Pickering Motors	34800			moana@pickmotors.co.ck
	Te Vaianga	34307			<a href="mailto:metzs111@gmail.com">metzs111@gmail.com</a>

**15. MANGAIA EMERGENCY OPERATION CENTRE**

## 16. MANGAIA RESOURCES

### GOVERNMENT & PRIVATE SECTORS MACHINERIES as of October 2017

Agency	Contact number	RESOURCES AVAILABLE	Specify What res
Island Government	34289	Truck	Transportation, cartage
Infrastructure	34047	Machineries (Excavator, Loader, trucks.	All clearing of debris
Water works	34044	Truck	Cartage
Power	34044	Truck	
Vodafone	34680	Truck	
Health	34027	Truck	Cartage
Marine	34142	Boat	
Agriculture	34289	2 x Trucks, 1 x Tractor, 1 x Excavator	Cartage,

### PRIVATE SECTOR

List private companies who are willing to provide resources during time of Disaster.

Company	Contact number	RESOURCES AVAILABLE	Specify
P&P Aberahama Shop	34092	Truck	Preparedness – evacuate people to Evacuation Centre
Babe's Lodge	34092	Accommodation	For visitors assisting
Pickering trading	34800	Private Rental Vehicles	Transport
Anthony Whyte Rentals	34299	Private Rental Vehicles	Transport

## **ANNEX 1: CYCLONE EARLY WARNINGS**

### **PHASE 1 - CYCLONE ADVISORY (BLUE ALERT – 24 HOURS)**

*(Linked to Gale Force Winds – 34-47knots or 63 – 87kph)*

1. All schools will be advised to be closed
2. DRM Committee members are to secure their own home and family first before reporting to the EOC for duty
3. Follow up on neighbours and households within your responsible area and paying special attention to the disabled and elderly
4. Report to EOC for duty including a brief report to the Coordinator of the task carried out

### **PHASE 2 - STANDBY (YELLOW ALERT - 12 HOURS)**

*(Linked to Storm Force Winds 48-63 knots or 88-117kph)*

1. EOC is activated
2. All ministries and business will be advised to close all activities
3. Safety shelters in areas which are likely to be affected are activated
4. Evacuate coastline or disaster prone areas with assistance of Police if ordered by the National Controller
5. Any person who refuses to be evacuated will be removed by force by Police or run the risk of being arrested

### **PHASE 3 - WARNING (RED ALERT – 6 HOURS)**

*(Linked to Hurricane Force Winds – above 63 knots or 117kph)*

1. Final public warning issued by all sirens being activated
2. Any business, public activities must cease operating immediately
3. Carry out a final check of area of responsibility
4. All emergency response agencies & personnel are placed on standby to begin operations if called upon
5. NO person must endanger their life or the life of others by placing themselves in a vulnerable situation without approval of the coordinator.

### **PHASE 4 - STAND DOWN – (GREEN ALERT)**

Assessment begins refer to Section DISASTER ASSESSMENTS

## ANNEX 2: DROUGHT INFORMATION

Hazard:	Drought
Frequency:	Major event every 5 years
Severity:	Taro plantations become dry Reduce water supply
Location:	Worst affected area is _____
Time Period:	Worst time period affecting the island is from November to April
Speed of On-set:	Medium to Slow

<b>Vulnerability Assessment</b>	
<i>People:</i>	<i>Communities will be vulnerable after personal and community water supplies are depleted. Community-Drinking water must be checked and high levels maintained at all times.</i>
<i>Community-Sanitation</i>	<i>Water management in bathing, laundry use - fresh water usage must be managed well to avoid depletion. Water use for flush toilets must cease - transport and use sea water for flushing toilets to avoid diseases from spreading from toilets.</i>
<i>Property:</i>	<i>Increased fire risk – drums of water must be stored close to home or areas where fire is used.</i>
<i>Economy:</i>	<i>Agriculture, - Taro &amp; Nono exports Husbandry – Pigs, Goats especially the very young will die if not managed well. Tourism will be affected as environment will no longer be attractive, there will be fresh water and locally grown food shortages to sustain this industry for too long. Costs of importing foods will affect cost of tourist visiting and staying in accommodations.</i>
<i>Health</i>	<i>Increase in imported foods lead to an increase with health risks and an increase in health costs for locals.</i>
<i>Environment</i>	<i>Dry vegetation led to high fire risk and grounds become dry and dusty and eventually arid. Ecological imbalance (animals and plants need water)</i>
<i>Society:</i>	<i>Social disruption - no water and fruits for mixing homebrew Change in diet “Taro to bread effect” Depletion in tuna (eels) population in the lake – “Tai Roto”.</i>
<b>Potential Secondary Disasters</b>	
<i>Little to zero potable (drinking) water.</i>	<i>Dehydration leading to an increase in health risks &amp; malnutrition</i>
<i>Dry vegetation</i>	<i>High risk of uncontrolled fire</i>
<i>Food supply</i>	<i>Decrease in agricultural and husbandry production</i>
<i>Economy &amp; Tourism</i>	<i>Loss of employment as visitor numbers decrease</i>
<i>Security</i>	<i>Loss of power of earning leading to an increase in crime</i>

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<i>Social - depopulation</i>	<i>Eventually youth leave to seek better opportunities on other Islands or overseas leading to depopulation and a highly vulnerable population of very young and the elderly.</i>
<b><i>Disaster Coordinator to consider these-measure to alleviate impact of secondary disasters during a drought.</i></b>	
<i>Prevention/ Mitigation:</i>	<i>Each homeowner encouraged to install own water tanks. Local Government reps are encouraged to install more and repair damaged community water tanks. Community Awareness on conserving drinking water and changing practices when bathing or doing laundry. Also alter some practices in agriculture and husbandry to conserve water.</i>
<i>Preparedness:</i>	<i>Each family to ensure water levels are high at all times or tank is cleaned and filled regularly. Practice water conservation now. Public awareness for conserving water is maintained at high levels in the community including schools and tourist accommodations.</i>
<i>Response:</i>	<i>Water usage restrictions, shut down water supplies at certain times of the day. Change, inspect and monitor agriculture and husbandry usage of water. Hotel/ Motel water usage must be controlled. School usage must be monitored and controlled. Restrict community sports as water is consumed highly after these events. Encourage community to maintain sanitation practices- wash hands with soap &amp; clean water, after use of toilet and before preparing food. Encourage community to drink nu as an alternative drink between meals to remain hydrated. Also consider using coconut drink to feed animals.</i>  <b><i>Consider enforcing a total outdoor fire ban when clearing vegetation...consider mulching for plants.</i></b> <i>Move dry vegetation away from home or communities. Bury community disposed waste to avoid flies and rats from multiplying &amp; spreading-many diseases spread this way during a drought.</i>
<i>Recovery:</i>	<i>Keep flower plants under clear plastic – these keep plants better hydrated than been in direct sunlight.</i>
<i>Note</i>	<i>Other Measures should be added throughout the year as development to the plan.</i>



## ANNEX 3: BRUSH FIRE

### Hazard Assessments

Frequency: Between 6 -10 years  
 Severity: 1993- approximately 2/3 of the fern land including planted trees were destroyed. In 1979 this hazard threatened many plantations Coastal fire occurs very often  
 Location: Coastal – No threat to people only environment and wild life.  
 Fern land – forest and plantations  
 Time Period: Fern land – 2 days or more  
 Coastal – nothing else to eat  
 Speed of On-set: Fast – weather pending...strong wind can speed up the travel of this hazard. Dry weather for the weeks prior can also leave fire favorable dry debris.

<b>Vulnerability Assessment</b>	
<i>People</i>	<i>No communities located in the high-risk areas.</i>
<i>Property:</i>	<i>Few plantations will be affected</i>
<i>Economy:</i>	<i>Timber production may decrease. Restoration of timber and other affected areas will incur extra costs to community and local government and eventually national government</i>
<i>Environment</i>	<i>Deforestation later increasing land erosion therefore increasing vulnerability to Island from other hazards such as cyclones and sea surge. Erosion threatening wild life</i>
<i>Society:</i>	<i>Local government becomes dependent on national government and international donors for assistance. Loss of income may also result in locals migrating to find work.</i>
<b>Potential Secondary Disasters:</b>	
<b>Disaster Coordinator to consider these-measures to alleviate impact of secondary disasters during a brush fire event.</b>	
<i>Community</i>	<i>Regular tree trimming program to alleviate this threat from rapidly spreading</i>

## ANNEX 4: TSUNAMI INFORMATION

<b>Hazard Assessments</b>	
<b>Introduction to Tsunami's</b>	
<i>A Tsunami wave is caused several ways including; An earthquake, a land slip, an underwater land slip, a volcanic eruption and a meteor hitting the ocean. A tsunami wave is not a tidal wave and is not a singular wave but rather a wide and long wall of water hitting the coast at approximately 300 – 800 km/ Hr.</i>	
<i>Frequency:</i>	<i>Unknown – could be next week or in ten million years' time. No tools to predict or forecast. Unlike a tropical cyclone, it is not known if a tsunami has a high-risk period and if so when this is.</i>
<i>Vulnerability</i>	<i>Unknown - as research of outer islands by experts has not been done however caution must be exercised at all times.</i>
<i>Severity:</i>	<i>9.0 on Richter scale are the worst recorded in recent times – “Boxing Day tsunami 2004”. A similar reading in the “Kermadec trench” off the coast of Tonga will be devastating for the entire pacific. Prior to “Boxing Day event in 2004” many scientists believed a reading of this magnitude can never happen...but it happened.</i>
<i>Location:</i>	<i>All Coastal Communities</i>
<i>Time Period:</i>	<i>Last up to 24 hours and more</i>
<i>Speed of On-set:</i>	<i>Very fast – within the hour of an earthquake – Samoa Tsunami reached land 8 minutes after the first earthquake was recorded. Pending on location of epicenter from your address and magnitude of earthquake.</i>
<b>Potential Secondary Disasters</b>	
<i>People</i>	<i>All communities located below 5 meters above sea level. All communities located within a kilometer off the coast are at high risk.</i>
<i>Property:</i>	<i>Most plantations in low lying areas will be affected</i>
<i>Economy:</i>	<i>Tsunami damage includes water damage to infrastructure, structures and all coastal communities and vegetation.</i>
<i>Environment</i>	<i>Deforestation close to the coast is imminent and erosion will increase vulnerability to other hazards such as cyclones and sea surge.</i>
<i>Society:</i>	<i>Communities and local government will require national government and international donors for assistance.</i>

### Tsunami Procedure Guidelines

Note: there should be 6 designated people to activate sirens, 2 people per village for each of Ivirua, Tamarua and Oneroa. The primary focus for concern will be evacuation of Kaumata and Tavaenga Villages and those living or working close by the sea including Island Administration, Infrastructure, etc. It is also important to alert the entire island population in case people are working or playing by the sea e.g., fishing, travelers on the sea roads or workers at the harbor or airport.

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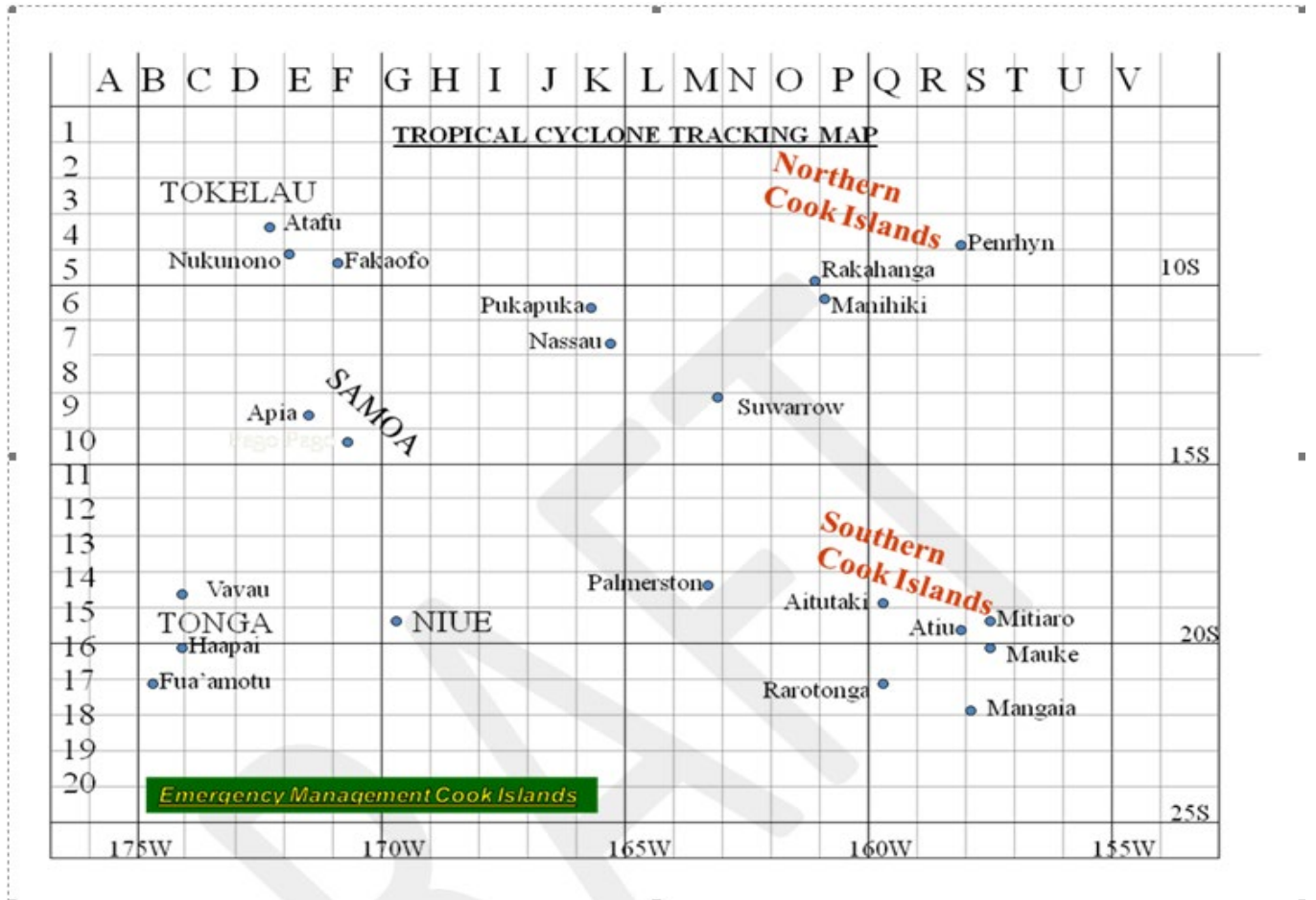
1. Activate all Sirens in the three villages immediately five times as soon as the first warning is received. Church Bells can be an alternative if the Siren fails.
2. TCI to issue SMS alert immediately. "Tsunami .... move to high ground immediately ...assist old and vulnerable"
3. Issue warnings on Mangaia TV if the station is broadcasting.
4. Mangaia Disaster Operations Centre will be opened and staff should report for duty ASAP. Emergency Communication systems activated for all Support Units.
5. All Support Unit members to report for duty. Total evacuation and relocation will commence if living areas are in danger. The focus will be on evacuation of Kaumata and Tavaenga villages, Islands Admin, Infrastructure, the harbor area, including Mangaia Lodges and Babes Lodge.
6. Cut lose all tied animals and evacuate if time permits

Note: If a tsunami warning is received at night, all residents must use neighbor to neighbor alert technique with particular focus on assisting the young, disabled and the aged.

The Mangaia Disaster Management Committee will work with Mangaia TV and Mangaia School to ensure that all Mangaians have a personal Tsunami plan in advance of any emergency. This will include advice to -

- **BE AWARE OF THE SEA.**  
If you see something that you think is unusual, then it probably is. Respond immediately!
- **HAVE A FAMILY EVACUATION PLAN.**  
Discuss your tsunami plan with your family and tsunami buddy, (a person you have specifically agreed to look after), agree to the plan, practice walking/biking to your pre-arranged safe location on the makatea.
- **ACT ON YOUR PLAN.**  
Do not wait to be told what to do!
- **DO NOT TRY TO FIND ABSENT FAMILY OR BUDDIES.**  
Remember, under your family plan, you have agreed to meet at a pre-arranged, safe location.
- **HAVE A READY BAG THAT INCLUDES ESSENTIAL ITEMS ONLY.**  
A radio and torch (with batteries), personal medicines, anything of personal value (e.g., passport, family photos) etc. Keep your ready bag where you can easily find it when you evacuate.
- **GO IMMEDIATELY INLAND TO YOUR PRE-ARRANGED, SAFE LOCATION.**  
Do not drive. Do not walk along the coast road. Go to high ground immediately. Stay at least eight hours or until the authorities' advice that it is safe to return home.

## ANNEX 5. TRACKING MAP



## ANNEX. 6 MANGAIA EVACUATION CENTRES

As of September 2017

Name	Location	Centre Manager/Coordinator	Contact Number	Description
Veitatei Hall	Oneroa	Mr. Tangitamaiti Moeauri	34001	Ready, holds 40 people, Needs repairs to 1 <sup>st</sup> Floor Back Stairs, no safety rails
Keia Hall	Oneroa	Taoi Nooroa	34055 / 80055	Currently Under Renovation. Not suitable for Shelter until completed. (March 2024)
AOG Church	Oneroa	Pastor Mini Dean	34127 34319	Ready, holds 40 people, General Maintenance
Karanga Hall	Ivirua	Daddy Mauriati	34098 51326	Currently Under Renovation. Not suitable for Shelter. (March 2024)
Queen Mary Hall	Ivirua	Ngatamariki Paia	34240 52054	Ready, holds 50 people, General Maintenance.
Sunday School Hall	Ivirua	Vaike Ongoua	34114	Ready, holds 40 people General Maintenance needed
Kiriapi Meeting House	Tamarua	Aerenga Matapo	34183 51324	Ready, holds 30 people, General Maintenance
Tepauru Meeting House	Tamarua	Ngatamaroa Pareina	34203	Currently Under Renovation. Not suitable for shelter. (February 2024)

## **ANNEX. 7 CATERGORY OF CYCLONES**

### **CATEGORY 1**

Category 1 cyclone strongest winds are Gales will be imminent with typical gusts over open flat land of 90-125 km/h. The impact of this category could be the damage to old traditional thatches buildings and poorly built houses and damage to some garden crops such as banana and fruit trees.

### **CATEGORY 2**

Category 2 cyclone strongest winds are destructive winds with typical gusts over open flat land of 125-164 km/h. Minor house damage and significant damage to signs, trees and local thatch house is expected over the islands. Having damages to food crops and fruit trees. Expected risk of power failure.

### **CATEGORY 3**

Category 3 cyclone strongest winds are expected and VERY DESTRUCTIVE winds with typical gusts over open flat land of 165 - 224 km/h. Some roof and structural damage from semi-building to permanent building including the local thatch houses destroyed. Power failures are likely imminent. Possible minor damages to public utilities and Infrastructures.

### **CATEGORY 4**

Category 4 cyclone strongest winds are VERY DESTRUCTIVE winds with typical gusts over open flat land of 225 - 279 km/h. Significant roofing loss and structural damage are expected. Many thatch houses destroyed and blown away. Dangerous airborne debris. Widespread power failures are expected

### **CATEGORY 5**

Category 5 cyclones' strongest winds are VERY DESTRUCTIVE winds with typical gusts over open flat land of more than 280 km/h. (Severe tropical cyclone) extremely dangerous with widespread destruction. Building, trees and public infrastructures are expected to be badly affected.

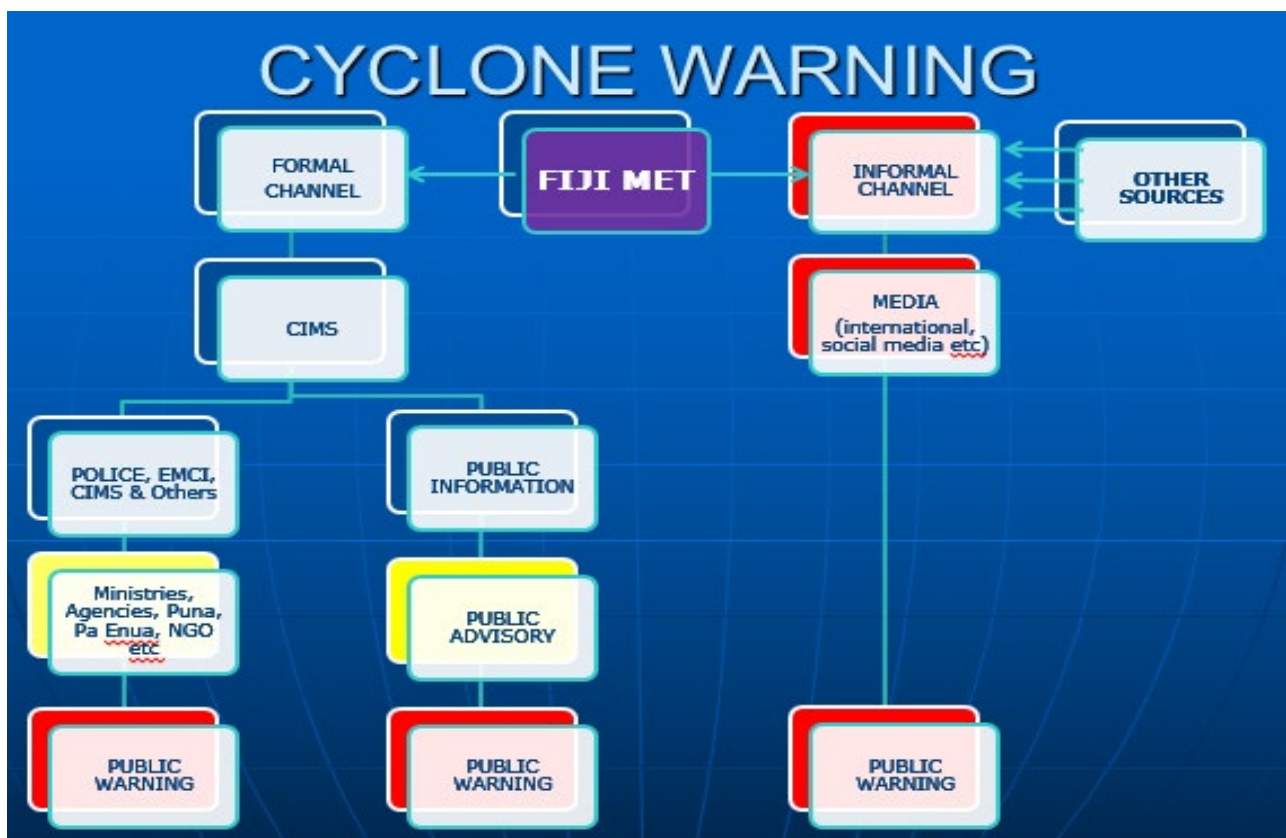
## ANNEX 8: MAPS



## ANNEX 9: CYCLONE INFORMATION

A Special Weather Bulletin is normally disseminated by the Cook Islands Metrological Services (CIMS) and this information is transmitted over radio, CITV, telephones, mobile, emails and our coconut wireless.

If any event is considered to be serious CIMS, POLICE, EMCI will discuss the situation and may call on or consult with other key stakeholders before making a decision concerning a national response. All response agencies including the Pa Enea Coordinators will then be contacted of any actions that may be required to be implemented immediately.





## ANNEX 10: CYCLONE INFORMATION

### 1. Pre- Hazard Planning and Preparations

Table 2 Pre-hazard planning Phase

STAGE 1	ACTIVITIES
<b>NORMAL STAGE MAY -OCTOBER</b>	<b>NORMAL ACTIVITIES RELATED TO IMPROVING PLANS AND STRUCTURES</b>
<ul style="list-style-type: none"> <li>• <b>GOALS</b></li> </ul>	Island Government and Community Leaders to review plans, consider improvements to it and to the evacuation centres
<ul style="list-style-type: none"> <li>• <b>AWARENESS AND PREPARATORY ACTIVITIES</b></li> </ul>	<ol style="list-style-type: none"> <li>1. Consider awareness activities especially relating to;                             <ul style="list-style-type: none"> <li>• Compliance to building standards and codes</li> <li>• Avoid building in low lying and high risks areas.</li> <li>• Tie down of homes and buildings</li> <li>• Clear trees around homes and roadways</li> </ul> </li> </ol>
<ul style="list-style-type: none"> <li>• <b>MANAGEMENT ACTIVITIES</b></li> </ul>	<ol style="list-style-type: none"> <li>1. Capacity building activities in all areas                             <ul style="list-style-type: none"> <li>• Tracking of cyclones using maps</li> <li>• Updating of organisation structures and role and responsibility of staff and personnel in Charge</li> <li>• GIS tools for tracking clouds and potential rain</li> <li>• Identifying and Marking of Tsunami escape routes</li> </ul> </li> <li>2. Consider enforcement of relevant codes, by-laws and regulations.</li> <li>3. Secure DRM response resources</li> </ol>

### 2. Cyclone Season - Raise Community Awareness and Preparedness

Table 3. Hazard Season Preparation Phase

Stage 2	Activities
<b>CYCLONE SEASON NOVEMBER- APRIL</b>	<b>PREPARE FOR THE CYCLONE. TSUNAMIS AND TDs</b>
<ul style="list-style-type: none"> <li>• <b>GOAL</b></li> </ul>	Improve capacity of community as well as Island response agencies and personal to manage emergencies.
<ul style="list-style-type: none"> <li>• <b>AWARENESS AND PREPARATORY ACTIVITIES</b></li> </ul>	<ol style="list-style-type: none"> <li>1. Increase implementation of DRM awareness through media (TV programs and Radio) including Cyclone preparedness at all levels in the communities.</li> <li>2. Improve capacity of PIG to track possible cyclones while in touch with Met office and the National radio</li> </ol>

	<p>3. Consider awareness activities as follows;</p> <ul style="list-style-type: none"> <li>• Compliance to building standards and codes</li> <li>• High risk areas and avoid building in these areas.</li> <li>• Tie down of all buildings</li> <li>• Clear trees around homes and roadways</li> <li>• Remove boats and canoes to safe and higher ground.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>MANAGEMENT ACTIVITIES</b></li> </ul>	<ol style="list-style-type: none"> <li>1. PIG undertake full community safety assessment for at risk building or trees threatening homes. Fell and remove these</li> <li>2. Late October to early November <u>run a mock and real cyclone drill with all the response agencies</u> and individuals</li> <li>3. All response agencies on standby mode ready to kick in as soon as risk are presented to the communities concerned; <ul style="list-style-type: none"> <li>• Vehicles and heavy machineries ready for operation</li> <li>• Tools, chainsaws, safety gear and stocks at ready</li> <li>• Food, water, medicine to be stocked</li> </ul> </li> <li>4. Cyclone Centres checked for readiness</li> </ol>

### 3. Cyclone Season – Hazard Response

Table 4. Hazard Season Preparation and Response Phase

Stage 3	Activities
<b>EMERGENCY. NOVEMBER- APRIL</b>	<b>WHEN A HAZARD IS IDENTIFIED</b>
<ul style="list-style-type: none"> <li>• <b>GOAL</b></li> </ul>	Effectively implement designated roles and responsibilities allocated to response teams as clarified in the DRM plans
<ul style="list-style-type: none"> <li>• <b>AWARENESS AND PREPARATORY ACTIVITIES</b></li> </ul>	<p>Increase awareness to get people ready including last minute consideration for;</p> <ul style="list-style-type: none"> <li>• Tie down of structures and building possible flying objects.</li> <li>• Install shutters</li> <li>• Local Government <ul style="list-style-type: none"> <li>• Move important documents and computers to safe areas and lock office</li> </ul> </li> <li>• Prepare Evacuation centre to receive people <ul style="list-style-type: none"> <li>• Move to evacuation centres as required</li> <li>• Manage activities in the Evacuation centres</li> </ul> </li> <li>• Stay indoors and keep alert</li> <li>• Listen to Radio</li> <li>• Know the Emergency Numbers and report any incidents;</li> <li>• Stay indoors until the cyclone “ALL CLEAR” message is given on radio, television and/or internet</li> </ul>

<ul style="list-style-type: none"> <li><b>MANAGEMENT ACTIVITIES</b></li> </ul>	<ul style="list-style-type: none"> <li>Update Response agencies/teams via Text messaging</li> </ul> <p>EOC opened and Local Government response teams in their respective stations;</p> <ul style="list-style-type: none"> <li>Commence tracking hazard using relevant tools                             <ul style="list-style-type: none"> <li>Cyclone tracking maps</li> <li>Internet and radios and NEOPC in Rarotonga</li> </ul> </li> <li>Hourly communication between all emergency units</li> <li>Response as required</li> <li>Periodically update Response agencies/teams via Text messaging.</li> </ul> <p><b>IMPORTANT NOTE</b></p> <ul style="list-style-type: none"> <li><b>NO ONE SHOULD LEAVE SHELTERS OR HOMES UNLESS ABSOLUTELY NECESSARY.</b></li> <li><b>IF YOUR HOME IS DAMAGE TAKE REFUGE FROM FALLING STRUCTURE AND FLYING OBJECTS IN SAFE AREAS OF THE HOUSE</b></li> </ul>
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#### 4. Cyclone Season – Hazard Impact assessment and stand down

Table 5 Post Hazard Assessment Phase

Stage 4	Activities
<b>Assessment</b> November- April	<b>When the hazard has passed</b>
<ul style="list-style-type: none"> <li><b>Goal</b></li> </ul>	Account for the Damage and losses
<ul style="list-style-type: none"> <li><b>Awareness and preparatory activities</b></li> <li><b>Management Activities</b></li> </ul>	Immediate Situation Overview (ISO) This assessment is to be carried out by each response agencies (Infrastructure, Health, Education, immediately after a disaster and provides general overview on <ul style="list-style-type: none"> <li>Loss of lives or displacement of people</li> <li>Damage to properties and infrastructure (roads, airport etc.)</li> <li>Water, food and shelter status</li> </ul> Damage Assessment (IDA) (to be carried out by response agencies after a disaster and provides further information about the level and extent of damage in each sector. The IDA information is used to determine; <ul style="list-style-type: none"> <li>Priority needs and assistance required</li> <li>Preliminary estimate of the cost of damages in the country (food, water, shelter, housing, clothing, access, etc.)</li> </ul>

## ANNEX 11: TABLE OF HAZARDS

	<b>Hazards</b>	<b>Level of Threats</b>
Natural Disasters	Tropical Cyclone & Wind Storms	High
	Drought	High
	Floods	High
	Wave surges	High
	Health Epidemic	Medium
	Land slides	Medium
	Tsunami	Medium
	Earthquake	Low
Man-Made Disasters	Fires	High
	Aviation and Maritime Disaster	Low
	Industrial Accidents	Low
	Marine and lagoon pollution	Medium
	Other man-made threats including the civil impacts of armed conflict (Terrorist)	Low
Agriculture Disaster	Agriculture Pests and Diseases	Medium
Health Disaster	Epidemic	Medium to Low
	Pandemic	Low

## ANNEX 10: TABLE OF KNOWN HAZARDS TO MANGAIA

<b>Historical Timeline for Hazards - Mangaia</b>	
<b>Hazards</b>	<b>When</b>
Fire – Forest/Bush	1960, 1984, 1985, 1987, 1993, 1996, 2005, 2006, 2010, 2016
Fire – House	1985, 1996, 2005, 2006, 2008, 2015, 2017
Cyclones	1965- Wave surge, 1997- Martin, 2004 – Heta, 2005 – x 5, Nancy, Percy, Meena, Olaf, Rae
Tsunami	2011, 2012
Drought	1968-69, 1987-89, 2010-13
Flood	1997, 1999, 2000, 2002, 2005
Health	1960- TB, 1990 & 2001 Dengue
Agriculture	1985- Fruit fly, 2009 Thrift, 2010- Pu Nu (Coconut Beetle infestation???)  2002 & 2011- Land Slide
Marine	1980- Taramea –Crown of Thorns outbreak