

# Palmerston Island



## Disaster Risk Management Plan

*(Reviewed October 2023)*

## Table of Contents

|   |    |
|---|----|
| <b>1. INTRODUCTION</b> .....                                | 3  |
| <b>2. OBJECTIVES OF THE PLAN</b> .....                      | 3  |
| <b>3. HAZARDS</b> .....                                     | 3  |
| <b>4. PALMERSTON PROFILE</b> .....                          | 4  |
| <b>5. DISASTER RISK MANAGEMENT COMMITTEE</b> .....          | 5  |
| <b>6. PALMERSTON DRM COMMITTEE CONTACT LIST</b> .....       | 5  |
| <b>7. SUPPORT SERVICES IN THE PA ENUA</b> .....             | 6  |
| <b>8. ROLES &amp; RESPONSIBILITIES</b> .....                | 7  |
| a. PA ENUA DRM COMMITTEE .....                              | 7  |
| b. PA ENUA DRM COORDINATOR .....                            | 7  |
| c. TAPERE DRM COORDINATOR .....                             | 7  |
| d. GOVERNMENT MINISTRIES AND AGENCIES.....                  | 7  |
| e. NON-GOVERNMENTAL ORGANISATIONS.....                      | 14 |
| <b>9. PA ENUA EMERGENCY OPERATIONS CENTRE</b> .....         | 14 |
| <b>10. NATIONAL DRM STRUCTURE</b> .....                     | 15 |
| <b>11. NATIONAL EMERGENCY OPERATION CENTRE (NEOC)</b> ..... | 15 |
| <b>12. ACTIVATING A STATE OF EMERGENCY</b> .....            | 15 |
| <b>13. ACTIVATING A STATE OF DISASTER</b> .....             | 16 |
| <b>14. SITUATION REPORT</b> .....                           | 16 |
| <b>15. INITIAL DAMAGE ASSESSMENT</b> .....                  | 16 |
| a. IMMEDIATE SITUATION OVERVIEW (ISO).....                  | 16 |
| b. INITIAL DAMAGE ASSESSMENT (IDA) .....                    | 16 |
| c. DETAILED SECTOR ASSESSMENT (DSA) .....                   | 16 |
| <b>16. SAFETY SHELTERS</b> .....                            | 17 |
| <b>17. DISABILITIES AND ELDERLY</b> .....                   | 17 |
| <b>ANNEX 1: CYCLONES</b> .....                              | 18 |
| a. PREPAREDNESS & AWARENESS.....                            | 18 |
| b. CYCLONE RESPONSE PHASE GUIDELINES.....                   | 19 |
| c. CYCLONE CATEGORIES.....                                  | 20 |
| d. CYCLONE TRACKING MAP .....                               | 21 |
| <b>ANNEX 2: TSUNAMI INFORMATION</b> .....                   | 21 |
| <b>ANNEX 3: EARLY WARNING</b> .....                         | 23 |
| <b>ANNEX 4: BUSH FIRE</b> .....                             | 24 |
| <b>ANNEX 5: DRM CYCLE</b> .....                             | 25 |

## 1. INTRODUCTION

This plan is a practical guide to disaster preparedness and response for Pa Enea.

During a disaster daily life can be disrupted in many ways, including telecommunication and power outages, disruption to basic services, damage to roads and infrastructure, and displacement from homes. Disaster preparedness and response is a collective effort and includes households, community groups, churches, civil society, island councils, government agencies and emergency services.

**Emergency Management Cook Islands (EMCI)** is the national coordinating agency for disasters. EMCI works with many agencies and groups to coordinate response activities. **Disaster Risk Management (DRM) Committees** in the Puna and Pa Enea play an important role in the Cook Islands. They work at a local level helping to coordinate response activities, share information, and support their communities.

## 2. OBJECTIVES OF THE PLAN

The objectives of this plan are;

- 1) Provide a management and operational structure for mitigation, prevention, preparedness, response and recovery to any hazard in the area.
- 2) Provide clear roles and responsibilities of all key stakeholders within the Puna before and during a national emergency or disaster.
- 3) To ensure residents are prepared to respond effectively to the threats of any Hazards.
- 4) To ensure that all resources required for the implementation of this plan are provided, maintained and readily available.
- 5) To ensure that the safety shelters are readily available and managed for use in the event of an evacuation of residents within the area.

## 3. HAZARDS

Cyclones are the most well-known hazard in the Cook Islands however other hazards range from disease outbreak to fire as highlighted in the list and the basics of this plan can be applied to all hazards. These are only some of the listed hazards

| Hazards                        | Level of Threat |
|--------------------------------|-----------------|
| Tropical cyclone & wind storms | High            |
| Drought                        | High            |
| Floods                         | High            |
| Fires                          | High            |
| Epidemic                       | Medium          |
| Pandemic (global)              | Medium          |
| Land slides                    | Medium          |
| Aviation and maritime disaster | Low             |
| Industrial accidents           | Low             |
| Armed conflict or terrorism    | Low             |
| Tsunami                        | Low             |

## 4. PALMERSTON PROFILE

Palmerston Island is a low lying atoll in the southern group and 280 miles north-west from Rarotonga. The encircling reef is about 35 kilometers long and has six main motus with scattered small motus and sandbanks.

On the south western side of the island is the main motu called Palmerston it is also known as Home Island, the settlement is located here. As an atoll the motu's physical features is made up of coral debris and sand covered mainly with coconut trees, tamanu, pandanus and salt water resistant shrubs and hardy ngangie. On Palmerston 'Home Island' man made dug garden pits are found in the centre of the island to grow 'puraka' and a variety of fruit trees.

The tailings from these dug out pits make up the highest point of the island about 6 -8 meters above sea level.

On the western side of the reef several natural passages are located, they are all shallow passages leading into the lagoon. The deepest section of the lagoon is about 90ft.

Palmerston Island is vulnerable to cyclones as it is located in the convergent zone where cyclones often track and historically has suffered devastating cyclones in 1926 and 1935. As a low lying island it is vulnerable to sea surges, king tides and tsunami's coming from the Kermadec or Tonga trench.

There are no natural streams only limited ground water is found, periods of prolong drought can be devastating for crops, trees / vegetation. Potable water is harvested from rain roof top catchments and stored in water tanks.

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

Population (2023 EMCI Survey) 31Oct2023

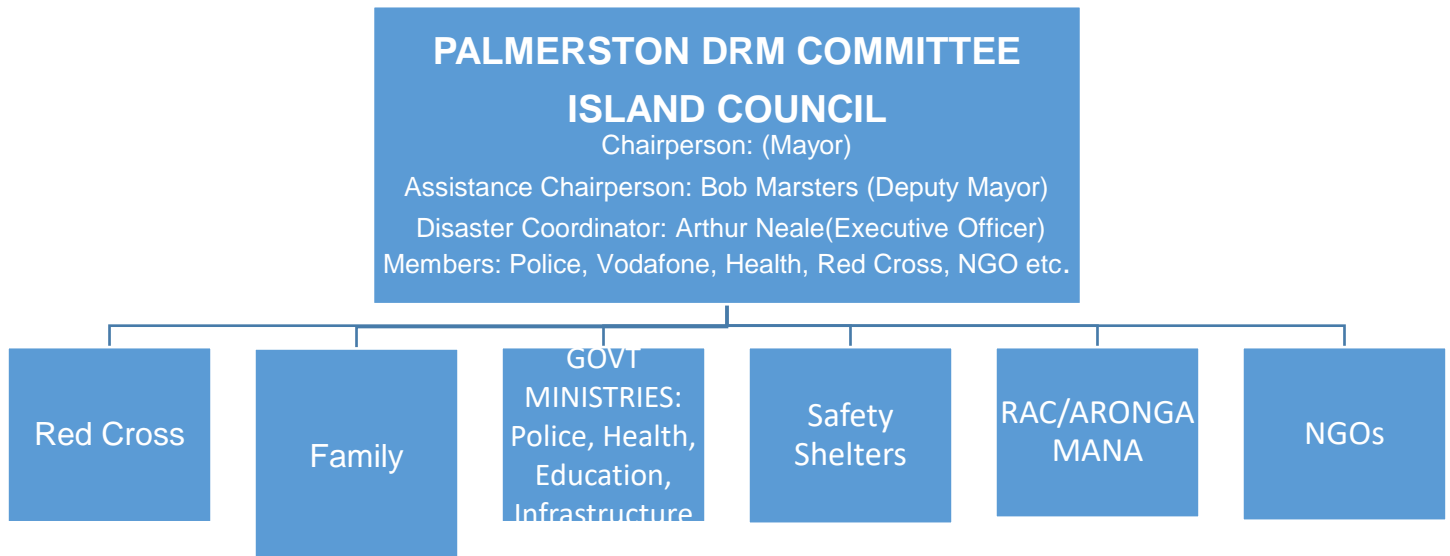
| TOTAL | Male | Female | Ages 1-14years | Ages 15-44 Years | Ages 45-59Years | Ages 60+ |
|-------|------|--------|----------------|------------------|-----------------|----------|
| 28    | 20   | 8      | 6              | 14               | 6               | 2        |

| Population                      |      |      |      |      |      |      |      |
|---------------------------------|------|------|------|------|------|------|------|
| 1971                            | 1981 | 1991 | 1996 | 2001 | 2011 | 2016 | 2021 |
| 62                              | 51   | 49   | 49   | 48   | 60   | 58   | 25   |
| (CI Stats/EMCI Geo Portal 2021) |      |      |      |      |      |      |      |

### EMCI GEO PORTAL 2021



## 5. DISASTER RISK MANAGEMENT COMMITTEE



## 6. PALMERSTON ISLAND DRM COMMITTEE CONTACT LIST

| Name | Role  | Work | Home  | Mobile | Email address |
|------|-------|------|-------|--------|---------------|
|      | Mayor |      | 37627 |        |               |

Palmerston Island Disaster Risk Management Plan 2023 - Review

|                       |  |       |       |       |  |
|-----------------------|--|-------|-------|-------|--|
| Arthur Neale          | Executive Officer/Disaster Coordinator |       | 37622 | 55780 | <a href="mailto:exo.pamati@gmail.com">exo.pamati@gmail.com</a><br><a href="mailto:arthur.neale@cookislands.gov.ck">arthur.neale@cookislands.gov.ck</a><br><a href="mailto:palmerstonoffice@gmail.com">palmerstonoffice@gmail.com</a> |
| Bob Masters           | Head Matauia Family                    |       | 37634 |       |  |
| Arthur Neale          | Head Akakaingaro Family                |       | 37635 | 55780 |  |
| Taepae Marsters       | Head Tepou Tinoi Family                |       | 37627 |       |  |
| Edward Marsters       | Police                                 |       | 37617 |       |  |
| Mele Bakani           | HEALTH                                 | 37632 |       |       |  |
| Teriimaevaua Marsters | Red Cross                              |       | 37626 |       |  |
| Rev. Tangaroa Rongo   | RAC - Mission House                    |       | 37610 |       |  |
| Pati Eka Angelu       | Education                              |       |       |       |  |
| Charles Jnr Frisbie   | Energy                                 |       | 37626 |       |  |
| Charles Jnr Frisbie   | Infrastructure                         |       | 37628 |       |  |
| William Marsters      | Vodafone                               |       | 37632 |       |  |

## 7. SUPPORT SERVICES IN THE PA ENUA

Within each community there will be people and resources that may be helpful during a disaster. This could include members of parliament, private companies, non-government organizations or volunteer groups.

| Organisation/Role | Contact person        | Home  | Mobile | Notes   |
|-------------------|-----------------------|-------|--------|---|
| Island Government | Arthur Neale          | 37635 | 55780  |   |
| Police            | Edward Marsters       | 37617 |        | 1x Motorcycle   |
| Infrastructure    | Charles Jnr Frisbie   | 37626 |        | 1 x Case Tractor & 2 Trailer<br>1 x Excavator Lovol (limited operation)<br>1 x Sthil MS290 chainsaw<br>1 x Sthil MS170 chainsaw |
| Health            | Mele Bakani           |       |        | 1x Motorcycle   |
| Private           | Bob Marsters          | 37634 |        | 2x Motorcycle   |
|                   | Teriimaevaua Marsters | 37626 |        | 3x Motorcycle   |
|                   | Julianna Marsters     | 37636 |        | 2x Motorcycle   |
|                   | Edward Marsters       | 37617 |        | 1 x Quad + trailer  |
|                   | Raki Dick Marsters    | 37616 |        | 1x John Deere E-Gator   |
|                   | Will & Fiftieth Rowe  | 37612 |        | 2 x Motorcycle  |
|                   | Rev. Tangaroa Rongo   | 37610 |        | 1 x Motorcycle  |

## 8. ROLES & RESPONSIBILITIES

### a. PA ENUA DRM COMMITTEE

The DRM Committee shall;

- 1) Ensure the DRM Plan is kept current or at least be reviewed every two years
- 2) Disseminate information of prevention, mitigation, preparedness and response to the village as required
- 3) Maintain on-going communication and association with EMCI during peace time and during a national emergency or a disaster
- 4) Determine priority, responsibility and roles of each Emergency Services Agencies in the area during preparedness and response if required
- 5) Provide regular situation reports to EMCI during an event as required
- 6) Report directly to the National Emergency Operational Centre (NEOC) once a State of Emergency or a State of Disaster is declared.
- 7) Provide regular situation reports to the NEOC during an event

### b. PA ENUA DRM COORDINATOR

The Disaster Coordinator shall;

- 1) Chair the DRM Committee
- 2) Take leadership in coordinating and managing all activities from prevention, mitigation, preparedness to response in the area
- 3) Maintain on-going communication and association with the Director (EMCI) during peace time and during a national emergency or a disaster
- 4) Report directly to the National Emergency Operational Centre (NEOC) once a State of Emergency or a State of Disaster is declared.
- 5) Ensure regular situation reports (or damage assessment(s) are posted to EMCI or the NEOC as required

### c. TAPERE DRM COORDINATOR

- 1) Assist the Pa Enea DRM Coordinator and committee during the event
- 2) Report directly to the Pa Enea DRM Coordinator and committee
- 3) Take leadership in coordinating and managing all activities from prevention, mitigation, preparedness to response in the village as required

### d. GOVERNMENT MINISTRIES AND AGENCIES

| ROLES        | RESPONSIBILITIES FOR - ALL HAZARDS   |
|--------------|--|
| <b>MAYOR</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 EOC of available resources for possible deployment if necessary.</li> <li>• Manage the EOC</li> <li>• Maintain a population count of each village by household.</li> </ul> |

|                                 |  |
|---------------------------------|--|
|                                 | <ul style="list-style-type: none"> <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><br/> <b>HAZARD – <u>Drought</u></b></p> <ul style="list-style-type: none"> <li>• <b>Coordinate the operations according to the DRM Plan</b></li> </ul>   |
| <p><b>EXECUTIVE OFFICER</b></p> |  |
|                                 | <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 assistance 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> |
| <p><b>EXECUTIVE OFFICER</b></p> | <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; man power</li> <li>• Notify public and relevant agencies</li> <li>• Red Cross- Standby for assistance</li> </ul>   |



|                     |   |
|---------------------|---|
|                     | <ul style="list-style-type: none"> <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>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 assistance 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><br/>Replace standard resources</p>                               |
| <b>POLICE</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><br/>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>       |   |

|                              |  |
|------------------------------|--|
| <p><b>HEALTH</b></p>         | <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>  |
| <p><b>INFRASTRUCTURE</b></p> |  |
| <p><b>INFRASTRUCTURE</b></p> | <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 machinery 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</li> </ul> |

|                                |  |
|--------------------------------|--|
|                                | <p>compromised, should the work-party “on-site” supervisor deem an area unsafe despite directives from the EOC/ACG).</p> <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>  |
| <p><b>PUBLIC UTILITIES</b></p> |  |
| <p><b>PUBLIC UTILITY</b></p>   | <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> |
| <p><b>VODAFONE</b></p>         |  |
| <p><b>VODAFONE</b></p>         | <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> </ul>  |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"> <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><u>Response</u></b></p> <ul style="list-style-type: none"> <li>• SATLITE PHONE is made available to EOC in case of break down in 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> <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>   |
| <p><b>AGRICULTURE</b></p>   |   |
| <p><b>AGRICULTURE</b></p>   | <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>   |
| <p><b>SOCIAL WELFARE</b></p>  |   |
| <p><b>(Disability &amp; Elderly)</b></p> <p><b>SOCIAL WELFARE</b></p> | <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> <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>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>EDUCATION</b> | <p><b><u>Preparedness:</u></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><u>Response:</u></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><u>Recovery:</u></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>RED CROSS</b> | <p><b><u>Preparedness:</u></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><u>Response:</u></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><u>Recovery:</u></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>   |

e. NON-GOVERNMENTAL ORGANISATIONS

|   |   |
|---|---|
| <b>VILLAGE LEADERS</b>  |   |
| <b>COUNCIL LEADERS</b>  | <b>Preparedness</b> <ul style="list-style-type: none"> <li>• Work closely with the Mayor and the DRMC concerning all disaster management related activities</li> </ul>  |
|   | <b>Response:</b> <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>   |
|   | <b>Recovery:</b> <ul style="list-style-type: none"> <li>• Assist with the recovery as required</li> </ul>   |
| <b>UNIFORMED ORGANISATION</b><br>BOYS SCOUTS<br>BOYS BRIGADE<br>GIRL GUIDES<br>GIRLS BRIGADE<br>YOUTH | <b>ALL HAZARDS</b> <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> |

9. PA ENUA EMERGENCY OPERATIONS CENTRE

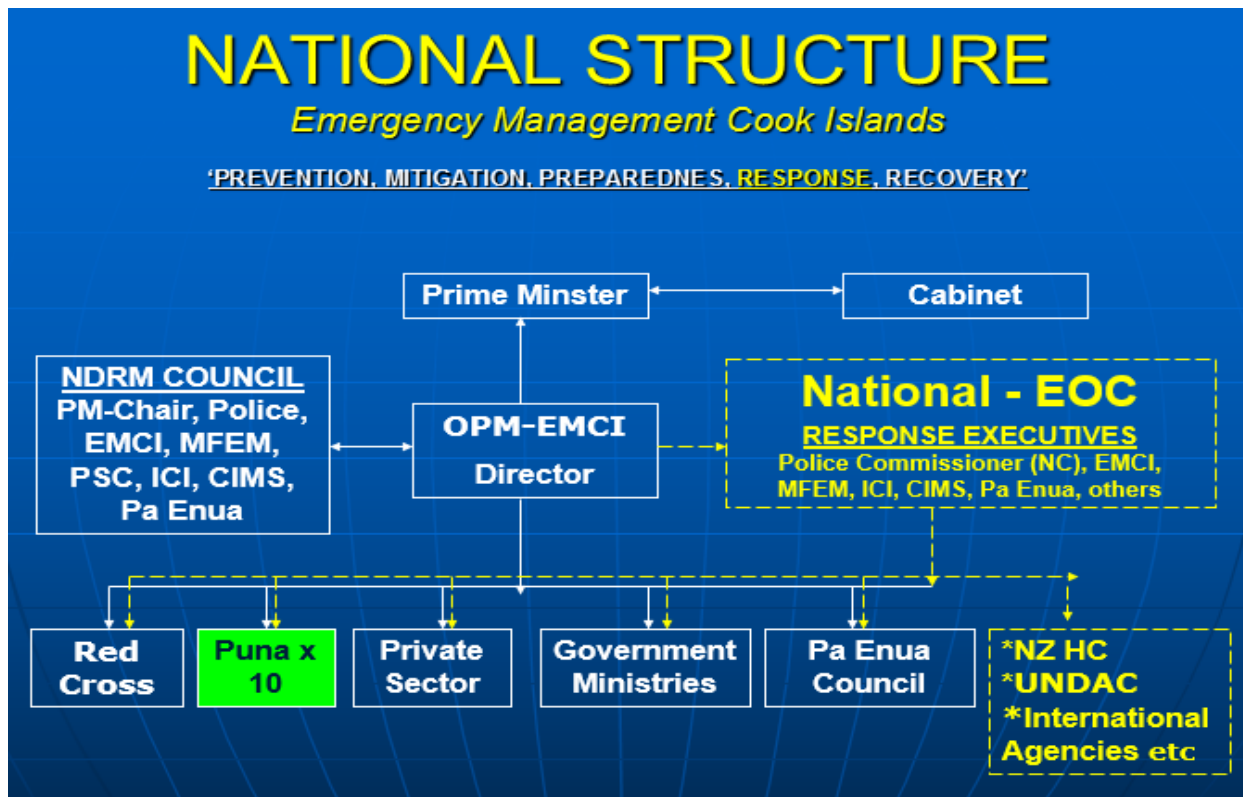
The Palmerston Island Emergency Operations Centre (EOC) is the hub for the DRM Committee to coordinate local Pa Enea operations and communicate from during an emergency. The EOC will be activated when advised by EMCI. The DRM Committee will directly report to the National Emergency Operation Centre (NEOC) and provide situation reports.

Skilled staff will be required within the EOC to perform these tasks;

- 1.1. Telephone communicator (s)
- 2.2. Radio Operator (s)
- 3.3. Log keeper (s)
- 3.4. Logistics

| Location of EOC                               | Contact           | Number | Notes |
|---|-------------------|--------|-------|
| Palmerston Island Emergency Management Centre | Executive Officer | 37621  |       |

## 10. NATIONAL DRM STRUCTURE



## 11. NATIONAL EMERGENCY OPERATION CENTRE (NEOC)

The NEOC is the National Emergency Operation Centre and this is normally activated when a National State of Emergency or Disaster is declared.

| Ministry/agency                                   | Landline                 | Mobile |
|---|--------------------------|--------|
| Emergency Management Cook Islands (EMCI)          | 29 609 - 29 601          | 54 005 |
| National Emergency Operation Center (NEOC)        | 22 261 - 22 262 - 22 263 |        |
| Police Headquarters – Rarotonga                   | 22 499 – 999             |        |
| MET Office – Rarotonga                            | 20 603 – 25920           |        |
| Office of the Prime Minister                      | 23 900 - 25 494          |        |
| Emergency Management Cook Islands Satellite Phone |                          |        |

## 12. ACTIVATING A STATE OF EMERGENCY

The Disaster Risk Management Act 2007 Section 20. A State of Emergency exists when -

- (a) Declared by the Prime Minister on recommendation from the Director;
- (b) The Director, in exceptional circumstances, determines that an immediate, coordinated, multi-agency response is required to deal with an emergency event.

### **13. ACTIVATING A STATE OF DISASTER**

The DRM Act 2007 Sec.19. In the event of a Disaster, the Prime Minister may declare a State of Disaster to exist in the whole or any part of the Cook Islands and such Declaration shall have immediate effect.

### **14. SITUATION REPORT**

A situation report is to be provided following an Initial Damage Assessment of the situation. It provides an overview of what has happened. The EOC should include important information about their area, this might include:

- Name of the national event/incident
- Time of the national event/incident
- Number of injured, missing, or dead
- State of damage - buildings, roads, power outages, debris (provide an overview)
- Name of safety shelters opened and number of evacuees
- Any pressing needs, for example, water, medical assistance etc.

A situation report is to be provided to the NEOC to activate a quick response to the event.

### **15. INITIAL DAMAGE ASSESSMENT**

An Initial Damage Assessment is to be carried out by each Puna and to be forwarded to the NEOC.

#### **a. IMMEDIATE SITUATION OVERVIEW (ISO)**

This assessment is to be carried out by the Puna assisted by the government agencies 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

#### **b. INITIAL DAMAGE ASSESSMENT (IDA)**

Ideally the IDA is carried out within the first 48 hours after a disaster by response agencies. It 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.)

#### **c. DETAILED SECTOR ASSESSMENT (DSA)**

Follow-up assessments by technical (TA) experts that provide detailed sector-specific information for purposes of planning and funding of recovery, reconstruction and rehabilitation in each sector.



## 16. SAFETY SHELTERS

Safety shelters are public buildings for the community to shelter in during an emergency – most commonly in a cyclone. Some people may need to stay in a shelter even after the threat has passed if there is damage to their home. The DRM Committee is responsible for the safety shelter and should appoint a shelter coordinator. The shelter is activated on the direction of the National Emergency Operations Centre. The Ministry of Health will provide a health professional to each activated shelter.

Evacuees should be encouraged to provide their own bedding and food, personal medication and any other emergency supplies. Tourists may take refuge in the shelters, but tourist operators are responsible for caring and feeding tourists (as far as possible).

Primary shelters are the first option for use, however if they are not safe or available, secondary shelters should be used. Primary shelters have been rated better for location, structure, and facilities available.

| PRIMARY SHELTERS                              | CONTACT      | PHONE NUMBER   | NOTES  |
|---|--------------|----------------|--|
| Palmerston Island Emergency Management Centre | Arthur Neale | 37620<br>37621 | 80 person capacity, 6 toilet (flush), 2 Showers<br>Concrete / Block,<br>Cooking facilities,<br>Water: (8x5,000litres tank)<br>Beds: 40 double collapsible bunks<br>Radio VH/HF: Yes – both (not yet connected)<br>Generator Power: Yes, can connect to change over switch.<br>Portable petrol gen-set. |
|   |              |                |  |

## 17. DISABILITIES AND ELDERLY

During a disaster some people need extra support. The following is a list of people identified as elderly or disabled who need to be supported and catered for during a national emergency or disaster. FILL IN BOXES BELOW

| Name  | Address |
|---|---------|
| <b>People with Disability (Assistance Required)</b> |         |
| NIL   |         |
| <b>Children with Special Needs</b>                  |         |

|                       |                      |
|-----------------------|----------------------|
| NIL                   |                      |
|                       |                      |
| <b>Elderly:</b>       |                      |
| 1. Raki Dick Marsters | Home phone no. 37616 |
|                       |                      |

## **ANNEX 1: CYCLONES**

In the event of a potential cyclone, Cook Islands Metrological Services (CIMS) will share a special weather bulletin via radio, CITV, telephones, mobile, emails and our coconut wireless. If it is serious CIMS, Police, and EMCI will discuss the situation and may consult with other stakeholders before making a decision concerning a national response. All response agencies including the Puna DRM Coordinators will then be contacted if they are required to act.

### **a. PREPAREDNESS & AWARENESS**

#### **1) Awareness Program**

EMCI will be running awareness adverts on CITV, radio and print media. This will include radio talk back and awareness program in schools and the villages with the assistance of the village DRM Committee. Any awareness notices issued by EMCI will be displayed at areas within the village best suited by the village DRM Committee.

#### **2) Private Dwelling Preparation**

Local residence and business owners are fully responsible for taking care and preparing their homes/ premises and yards well in advance of the threat from a tropical cyclone or any known hazard.

#### **3) Tree Trimming Program**

The Chairman of the DRM Committee may designate members from within the DRM Committee to lead village volunteers to identify and trim trees that pose a threat to homes, other structures, utilities (Power lines) and roads. However, some work is best left to professionals to carry out to avoid any damage to properties and public utilities. All this work to be carried out way before the cyclone season starts in November and not when a cyclone is approaching.

#### **4) Check Roofing Ties**

Local residence and business are encouraged to check their roofs and tie them down as required. It is recommended that the bottom, middle and top row of the roofing be screwed down for extra strength however due to cost of screws extra nailing is sufficient.

#### **5) Emergency Supplies**

All families are encouraged to have an emergency supply and this means having your own food, water and other supplies in sufficient quantity to last for at least 72 hours. Storing non-perishable food such as can food instead of frozen goods is highly recommended in case of power cut. Top up spare gas bottles for cooking, water tanks for your water supply, hurricane or similar type lamps for lighting.

## **6) Emergency Kit**

- Radio, Flashlight, Extra batteries, Cell phone with charger, candles, matches
- First aid kit, Medications and Medical supplies (hearing aids with extra batteries, glasses, contact lenses, syringes, etc.)
- Copies of personal documents (medication list and pertinent medical information, proof of address, deed/lease to home, passports, birth certificates, insurance policies)
- Baby supplies (bottles, formula, baby food, diapers)
- Sanitation and personal hygiene items.

## **b. CYCLONE RESPONSE PHASE GUIDELINES**

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

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 neighbors and households within your responsible area. Check on 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)**

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 refuse to be evacuated will be removed by force by Police or run the risk of being arrested

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

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)**

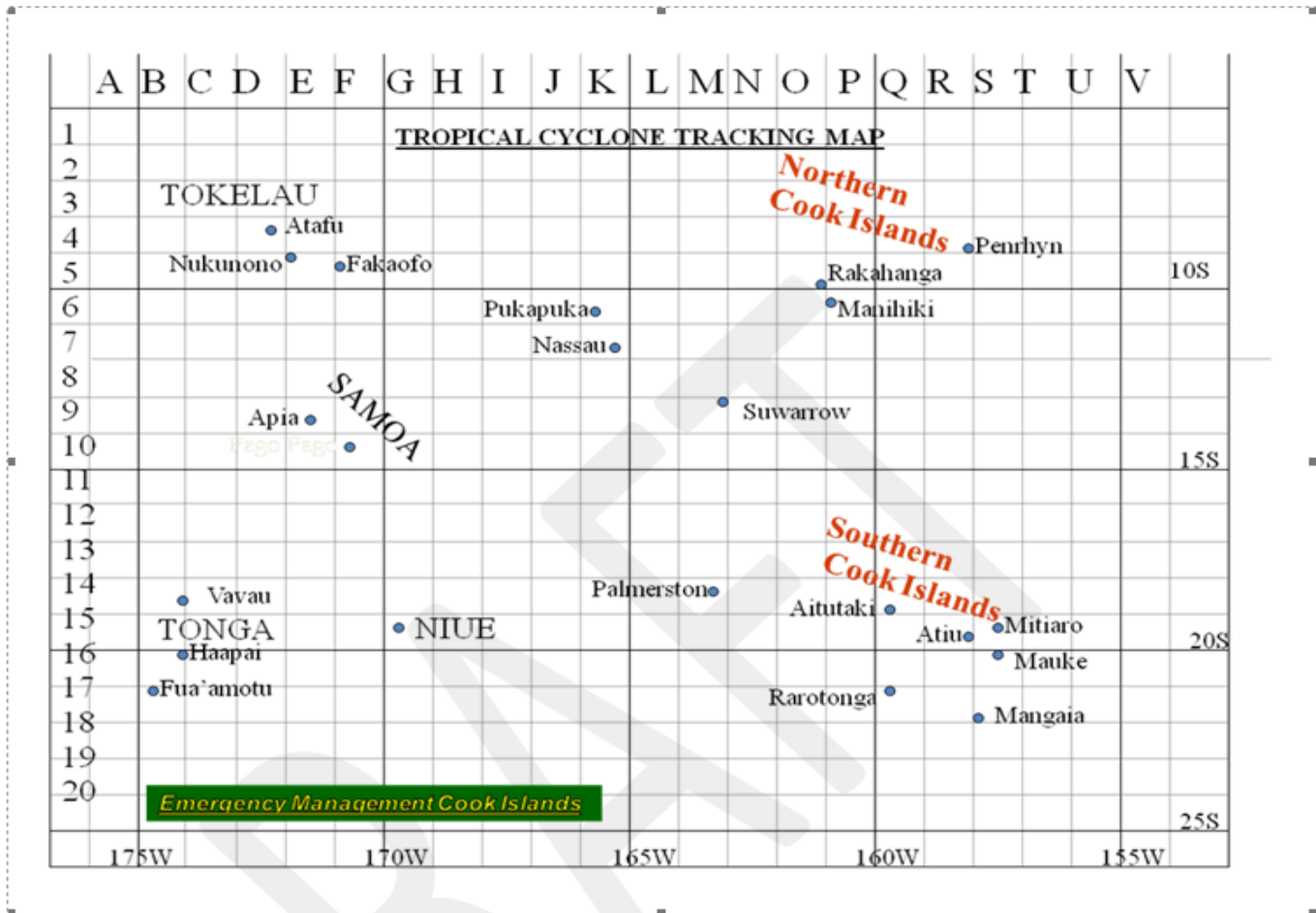
1. Damage assessments will be undertaken to help determine appropriate response.

c. CYCLONE CATEGORIES

Cyclones are measured by category, from one to five depending on strength. One is the weakest and five is extreme.

|                          |  |
|--------------------------|--|
| <p><b>CATEGORY 1</b></p> | <p>Strongest winds are <b>gales</b> – typical gusts of 90-125 km/h.</p> <p>Possible damage to old traditional thatched buildings and poorly built houses and damage to some garden crops such as banana and fruit trees.</p>   |
| <p><b>CATEGORY 2</b></p> | <p><b>Destructive winds</b> – gusts of 125-165 km/h.</p> <p>Minor house damage and significant damage to signs, trees and local thatched houses.</p> <p>Damaged to food crops and fruit trees. Expected risk of power failure.</p>                                       |
| <p><b>CATEGORY 3</b></p> | <p><b>VERY DESTRUCTIVE winds</b> with gusts 165 - 224 km/h.</p> <p>Some local thatch houses destroyed and some roof and structural damage for permanent buildings.</p> <p>Power failures are likely. Possible minor damages to public utilities and infrastructures.</p> |
| <p><b>CATEGORY 4</b></p> | <p><b>VERY DESTRUCTIVE winds</b> with gusts 225 - 279 km/h.</p> <p>Significant roofing loss and structural damage expected. Many thatch houses destroyed and blown away.</p> <p>Dangerous airborne debris. Widespread power failures expected.</p>                       |
| <p><b>CATEGORY 5</b></p> | <p><b>VERY DESTRUCTIVE winds</b> with gusts of more than 280 km/h.</p> <p>Extremely dangerous. Widespread destruction expected.</p> <p>Building, trees and public infrastructures are expected to be badly affected.</p>   |

d. CYCLONE TRACKING MAP



## ANNEX 2: TSUNAMI INFORMATION

A tsunami 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.

A large earthquake in the Kermadec Trench off the coast of Tonga will be devastating for the entire pacific.

A tsunami in the Cook Islands could arrive within one hour of an earthquake. The Samoa Tsunami reached land 8 minutes after the first earthquake was recorded. The size and arrival time of the tsunami depends on the magnitude of the earthquake and where the epicenter is.

All communities located within a kilometer off the coast are at risk.

A tsunami can cause death or injury, damage infrastructure and destroy plantations in low lying areas. It can last for more than 24 hours.

**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.

**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.

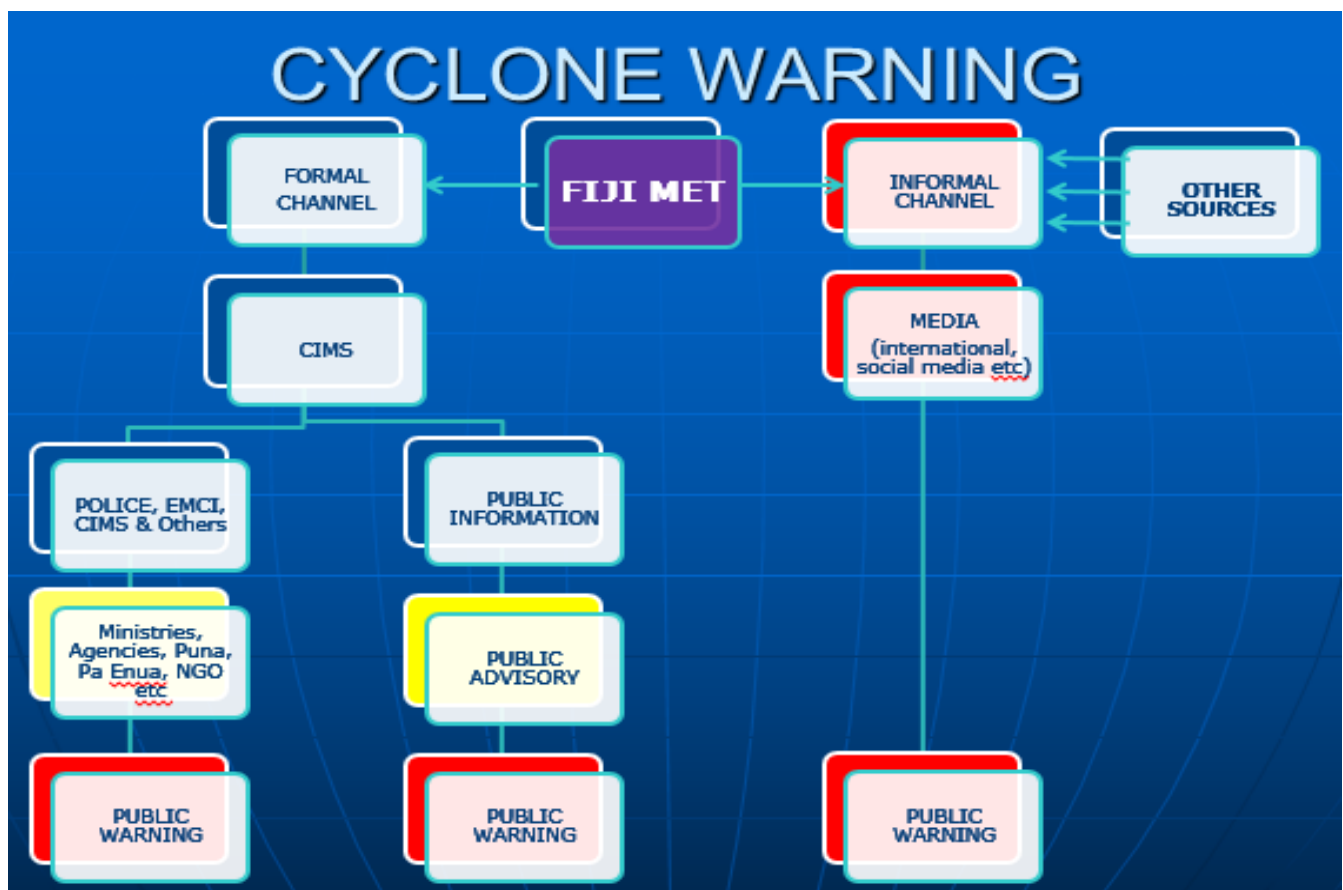
**GO IMMEDIATELY INLAND TO YOUR PRE-ARRANGED, SAFE LOCATION.**

Go to high ground immediately. Stay at least eight hours or until the authorities advise that it is safe to return home.

## ANNEX 3: EARLY WARNING

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 Puna Coordinators will then be contacted of any actions that may be required to be implemented immediately.



## ANNEX 4: BUSH FIRE

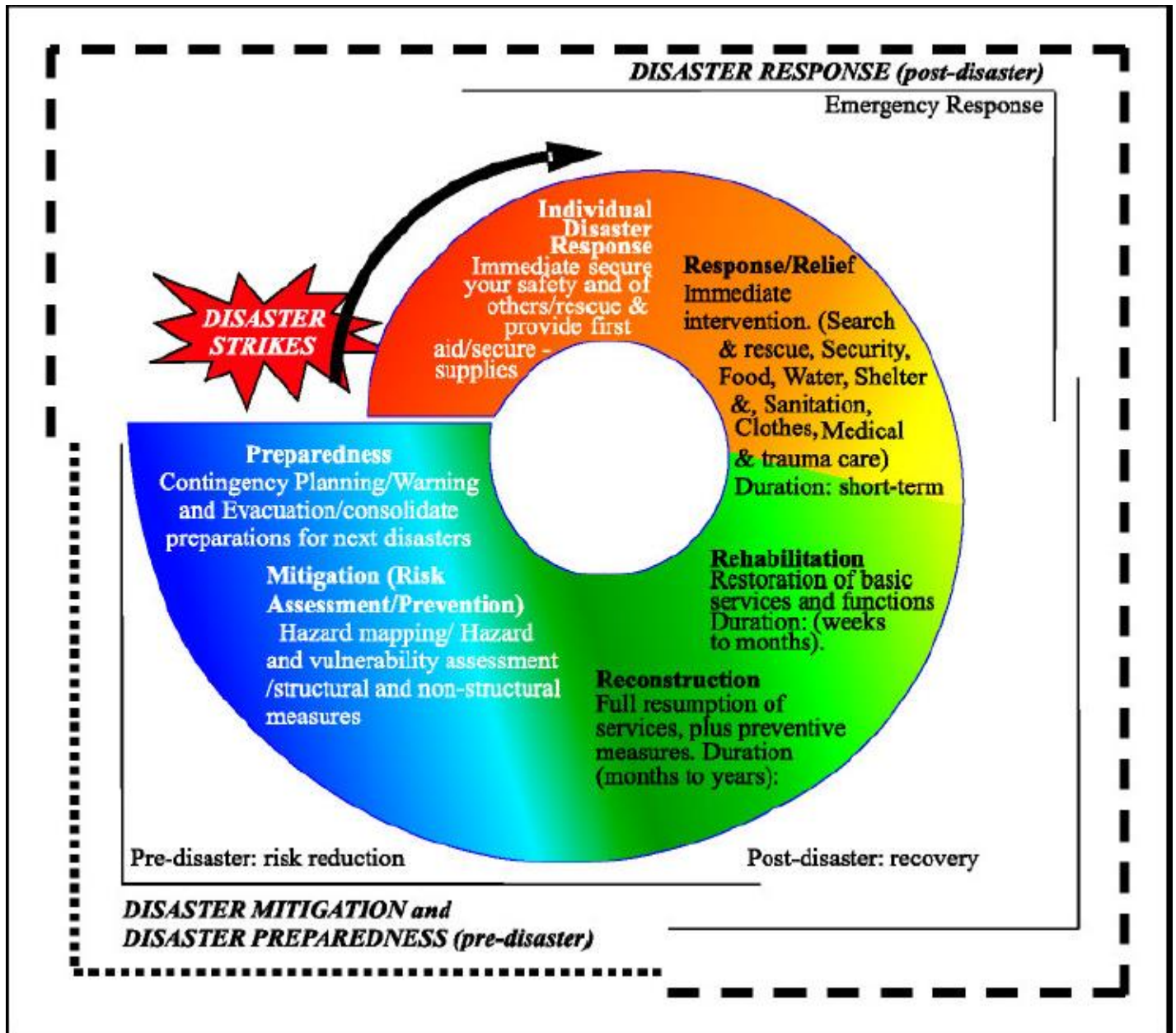
### Hazard Assessments

**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><i>Vulnerability Assessment</i></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><i>Potential Secondary Disasters:</i></b>  |   |
| <b><i>Disaster Coordinator to consider these-measures to alleviate impact of secondary disasters during a brush fire event.</i></b> |   |
| <i>Community</i>  | <i>Regular tree trimming program to alleviate this threat from rapidly spreading</i>  |



## ANNEX 5: DRM CYCLE



# ANNEX 6: PA ENUA MAPS



## **ANNEX 7: STANDARD OPERATING PROCEDURES - WARNING SIREN**



Since 2010, all Outer Island (Pa Enuā) communities including Rarotonga communities were issued with a carrel & carrel warning siren by the office of Emergency Management Cook Islands (EMCI). Communities were either issued a double ended siren, a single ended siren or a manual siren.

The Warning Siren is to be activated/ sounded at the decision of the Disaster Coordinator, after consulting the Disaster Risk Management Council of that Island.

Activating or sounding the warning siren is the final warning for the community to evacuate immediately, to a safer area or to their designated Safety Shelter/s.

The warning siren can be activated for any hazard that poses a threat to human lives, property and the environment. These hazards can either be a cyclone, tsunami, bush fire or any other hazard determined by the DRM Council and the Disaster Coordinator to be risk to their community.

### **SIREN ACTIVATION:**

1. Siren switched on to sound a steady tone for three minutes
2. Siren switched off and rested for three minutes
3. Siren switched on again to sound a steady tone for three minutes
4. Sirens may sound until the Disaster Coordinator is satisfied with its warning of the public.
5. No all-clear siren will be sounded.
6. The Public should listen to radio and/or local media for current weather information or as advised by the Disaster Coordinators or members of the DRM members.

### **WHAT THE PUBLIC SHOULD DO, DURING SIREN ACTIVATION;**

1. For Tsunami - move immediately away from coastal areas or move to higher grounds or your designated safety shelters
2. For cyclones – evacuate to safer buildings or to your designated safety shelters
3. Listen to your radio and/or the local media for current weather information and updates

### **SIREN TESTING & MAINTENANCE:**

1. Sirens should be fully tested annually
2. Sirens will be activated for three minutes during testing
3. This includes full cleaning & maintenance of the siren with paint, grease or use CRC as required to ensure the moving parts of the siren can move freely.