



Government of the Republic of Vanuatu
Ministry of Health

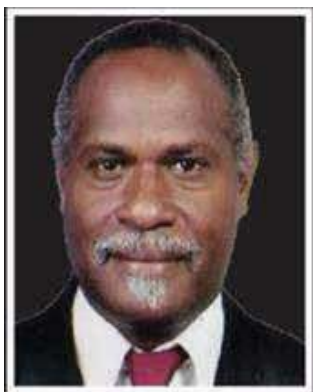
National Health Plan for Disaster Risk Management And Climate Change Adaptation 2021 - 2025



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Photo Credit: Phillippe Merois / WHO

Foreword



HONORABLE SILAS BULE MELVE (MP)

MINISTER OF HEALTH

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It gives me great pleasure, as the Minister of Health to present to you all, the National Health Disaster Risk Management and Climate Adaptation, 2021 – 2025. The Plan aligns with Vanuatu Climate Change DRR Policy 2016 – 2030, and the Cluster System of the Vanuatu Government. It also aligns itself with the National Sustainable Development Plan or the Vanuatu Peoples Plan. The aim of this plan is, to support the health and wellbeing of the people of Vanuatu through minimal disruption of the delivery of quality essential health services during and in the aftermath of natural disasters. It also ensures Vanuatu Ministry of Health can successfully address immediate and longer term disaster management challenges faces by the communities and the Country as a whole.

The Plan will be communicated to all level of health care in the country and to various stakeholders and partners. The plan provides a clear plan of action within the MOH and its partners to prevent, prepare, respond and recover from disasters. Provide a clear organizational structure and role statement for committees and individuals responsible to prevent, prepare, respond and recover from a disaster. Provide clear mechanisms to coordinate actions between Ministry of Health staff, and between the Ministry of Health, the National Disaster Management office, National Disaster Recovery Committee and other Ministries, NGOs, donors and private sector partners.

A new Health Plan requires a new vehicle to drive it. We cannot do this alone. Health is everybody's business, and therefore we need all you collective support at All levels of decision to see this plan come into effect.

On behalf of the Ministry of Health, Vanuatu Government, I now present to you all the National Health Disaster Risk Management and Climate Adaptation, 2021 – 2025 Plan.

MINISTRY OF HEALTH DISASTER MANAGEMENT PLAN

AUTHORITY TO PREPARE THE MINISTRY OF HEALTH DISASTER MANAGEMENT PLAN

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Acronyms and Abbreviation

COMS	Council of Ministers
EMT	Emergency Medical Team
EOC	Emergency Operation Centre
EWARN	Early Warning and Response Network
DOWR	Department of Water Resources
DRM	Disaster Risk Management
LPO	Local Purchase Order
MOH	Ministry of Health
MOH-DRMC	Ministry of Health - Disaster Risk Management and Climate Change.
MIPU	Ministry of Infrastructure and Public Utilities
NEOC	National Emergency Operation Centre
NSDP	National Sustainable Development Plan
NDC	National Disaster Committee
NDMO	National Disaster Management Office
NHP DRM-CCA	National Health Plan for Disaster Risk Management and Climate Change Adaptation.
PEOC	Provincial Emergency Operations Centre
SDG	Sustainable Development Goals
SOP	Standard Operating Procedures.
UNDP	United Nations Development Programme
VMGD	Vanuatu Meteorological Geo-Hazard
VMF	Vanuatu Mobile Force
VANMAT	Vanuatu Medical Assistance Team
WHO	World Health Organisation.

Chapter 1. Background

1.1 Introduction

Vanuatu is an archipelago comprising of 83 islands situated between Solomon Islands and New Caledonia. Vanuatu is ranked 131 out of 187 countries under the UNDP Human Development Index (HDI), which is calculated based on life expectancy at birth, access to education and information, and standards of living as a reflection of Gross National Income per capita¹. Vanuatu's economy is driven mainly by the tourism sector, farming and fisheries for subsistence, local markets and manufacturing sector. The economic urban bias is at odds with the estimated 75.6% of the population² which live in rural areas.

This plan, the National Health Plan for Disaster Risk Management and Climate Change Adaptation 2017-2020 (NHP-DRM-CCA) has been developed to assist the health sector in disaster preparedness and response. This plan links closely with the National Sustainable Development Plan (NSDP) to guide Vanuatu's development direction under the global Sustainable Development Goals (SDGs).

1.2 Vanuatu context

Although climate change is a global issue, countries in the Pacific region are particularly vulnerable to the effects of climate change which include; increased air and sea surface temperatures, sea level rise, changing rainfall patterns, ocean acidification and increased frequency and intensity of natural disasters in the future. Changes in climate can cause health impacts including; increased water and food borne diseases, increased vector borne diseases, malnutrition, fish poisoning. See Table 1.1 for the types of disasters that Vanuatu experiences and the potential impacts on health.

Vanuatu has been ranked as the country most at risk to the effects of disasters³, based on an assessment of exposure to disasters, vulnerability to their impact and the capacity to respond and recover from a disaster. Vanuatu is identified as the nation most in need of technical assistance and resourcing to establish systems and processes to decrease the impacts of, and respond to disasters. Vanuatu's high risk ranking can most closely be attributed to its exposure to a large number of potential natural disasters, including cyclones, flash floods, volcanic eruptions, earthquakes, tsunamis and different weather conditions. See Table 1.2 for the nature of impacts from threats encountered in Vanuatu.

¹UNDP, 2015; *Human Development Reports*, Vanuatu; <http://hdr.undp.org/en>; accessed 7th October 2015.

² UNFPA, 2014; *Population and Development Profiles: Pacific Island Countries*; Suva, Fiji; UNFPA Pacific Sub-Regional Office.

³ UNU-EHS, 2014; *World Risk Report 2014*; Bonn; United Nations University – Institute for Environment and Human Security

Table 1.1 Types of disasters to which Vanuatu experiences high risk of exposure

Disaster	Details	Health impacts
Cyclones	<p>Vanuatu experiences cyclones of varying strength each year, between November and April.</p> <p>Destructive winds can cause damage to housing and public buildings. Cyclones can also cause storm surges and flash flooding in low-lying and coastal areas.</p> <p>Landslides can also occur during cyclones with high rain volume.</p>	<p>Cyclones can impact public service delivery, livestock and agriculture, which can affect health, nutrition, livelihoods, local and national economic development.</p>
Volcanic eruption	<p>Vanuatu is home to seven active volcanoes on the islands of Gaua (TORBA), Kuwae (SHEFA), Nguna island (SHEFA), Ambae (PENAMA), Tanna (TAFEA), Lopevi and Ambrym (on which there are two - MALAMPA).</p>	<p>Volcanoes can cause volcanic ash fall and acid rain which can affect quality of catchment water, damage crops and buildings.</p> <p>Lava and volcanic mud flow can also cause destruction to infrastructure, damage crops and water catchments.</p>
Earthquake	<p>Vanuatu is situated on the Pacific ring of fire between the Pacific and Indo-Australian seismic plates. Vanuatu commonly experiences small and moderate intensity earthquakes, and is at risk of much larger earthquakes.</p>	<p>Earthquakes can suddenly disrupt health service delivery by damaging health facility infrastructure.</p> <p>Earthquakes can also cause landslides which can affect agricultural land, impacting on nutrition, livelihoods and local economic development.</p>
Tsunami	<p>Vanuatu has a considerable proportion of its coast-dwelling populations at risk of tsunamis, which are influenced by Vanuatu's seven active volcanoes, and its positioning on a high seismic activity zone.</p> <p>Many of Vanuatu's health facilities are located close to coastal-dwelling communities.</p>	<p>Tsunamis can damage health infrastructure and cause widespread destruction, affecting health, nutrition, livelihoods and water catchments.</p>
Flooding	<p>Vanuatu's high, steep mountain ranges have the effect of generating flash flooding in some parts of the country, especially in the event of extreme weather conditions such as cyclones and La Nina.</p> <p>Changes to weather conditions in recent decades have seen an increase in flash flooding events in Vanuatu and neighbouring countries.</p>	<p>Communities living in low-lying areas, on the coast or close to rivers are at risk of drowning, contamination of water sources and destruction of agricultural land and livestock.</p> <p>Remote communities can often be left isolated during flash flooding if bridges and roads are destroyed or become impassable.</p>

Disaster	Details	Health impacts
Drought	<p>While Vanuatu's mountain ranges serve as effective rain catchments in some parts of the country, other areas can be left dry and prone to drought.</p> <p>Climate change is increasing the frequency and intensity of dry periods.</p>	<p>Poor water storage capacity, particularly in remote areas, leaves communities and the agriculture sector vulnerable to seasonal drought. This can affect nutrition and livelihoods, and can influence incidence of communicable diseases such as diarrhoea.</p>
Diseases outbreaks and epidemics	An outbreak of communicable disease has the potential to affect large pockets of the population. Diarrhoea, vector borne diseases and influenza like illness are commonly seen in Vanuatu.	Disease outbreaks can result in widespread morbidity and possibly death.
Climate Change effects	Climate change is expected to increase average daily temperatures, increase frequency of extreme temperatures, generate sea level rise, increase ocean acidification and cause degradation of coral reefs, lengthen dry periods and increase the intensity and frequency of extreme rainfall.	Climate changes can cause increased risk of human disease and health problems including; vector borne disease transmission, heat related illness, damage to infrastructure, reduced availability of fresh water, food security issues, coral reef deterioration, reduced fisheries' productivity, loss of coastal land and reduced economic growth and revenue generation.
Man-made Disasters.	Manmade Disasters are the result of carelessness or human errors during technological and industrial use. The disasters are in the form of accidents, which occur all of a sudden and take a huge toll on life and property. Mostly such disaster can cause injuries, diseases and casualties where they occur. Common examples of man-made disasters are; Leakage of toxic chemicals, road accidents as a result of drink and drive, medicine and liquid overdose, the use of Namele leaves as deprivation act to stop people from accessing medical services due to land disputes or human disagreements.	Man-made hazards have short-term and long-term effects on the environment and human health. Short term effects on human health relate to casualties and diseases like blindness, cancer, paralysis, heart trouble, gastric and respiratory abnormalities. Long-term effects include genetic imbalances in humans and its impact on the future generations. Soil and water sources also remain polluted for long durations of time.

Table 1.2 Nature of impacts from threats encountered in Vanuatu

Threats	Risk Level High/moderate/low	Loss of Property	Disruption to water supply	Disruption to food supply	Damage to economy	Damage to health infrastructure	Damage to environment	Increase vector borne diseases	Increase in food poisoning	Infiltration into ground water
Cyclones	High	x	x	x	x	x	x	x	x	x
Volcanic Eruptions	Moderate- High	x	x	x	x	x	x		x	
Earthquakes	High	x	x	x	x	x	x	x		
Tsunami	High	x	x	x	x	x	x	x		x
Flooding	Moderate	x	x	x	x	x	x	x		x
El-Nino and La- Nina	Low		x	x			x	x	x	
Infectious Disease Outbreak	Moderate				x			x	x	
Climate change effects	Low - Moderate	x	X	x	x	x	x	x	x	x
Population Displacement	High	x	X	x	x		x	x		
Change on Weather patterns	High	x	X	x	x	x	x	x	x	x

Chapter 2. Aim and Objectives

2.1 Aim

To support the health and wellbeing of the people of Vanuatu through minimal disruption of the delivery of quality essential health services during and in the aftermath of natural disasters.

To assist the MOH to organize its resources in order to effectively and efficiently prevent, prepare, respond and recover to any future disaster or Emergency situation.

2.2 Objectives

The objectives of the plan are:

1. Provide a clear plan of action within the MOH and its partners to prevent, prepare, respond and recover from disasters
2. Provide a clear organizational structure and role statement for committees and individuals responsible to prevent, prepare, respond and recover from a disaster
3. Provide clear mechanisms to coordinate actions between Ministry of Health staff, and between the Ministry of Health, the National Disaster Management office, National Disaster Recovery Committee and other Ministries, NGOs, donors and private sector partners.

2.3 Ministry of Health policy

The MOH is committed to the following policy:

1. Maintain, and review the NHP-DRM-CCA every two years. The Planning Office is responsible to ensure that the review of this plan and other related operational plans are carried out every three (3) years.
2. The provision of health services in the event of a major emergency will be prioritized according to population needs and coordinated with other partners to ensure harmonized responses and actions.
3. The roles and responsibilities outlined in the document for disaster position holders will have priority over other roles, responsibilities and authorities in the event of a formally Council of Ministers declared State of Emergency.
4. Initial coordination and control, consistent with the Government of Vanuatu's decentralization Act and the MOH role delineation policy; initial coordination and control will be exercised at the lowest level, with higher level plans only activated after lower levels are unable to effectively manage.
5. All actions will support the NDMO National Disaster Management Act for disaster response and recovery

Chapter 3. Disaster risk management

Disaster Risk Management (DRM) is a concept that the MOH is supposed to be addressing on the areas of prevention, preparedness, Response and Recovery.

The 4 phases of the Disaster risk management cycle

- 1. Prevention**
- 2. Preparedness**
- 3. Response**
- 4. Recovery**



This NHP-DRM-CCA is intended to address the implementation of the 4 phases of the disaster risk management cycle.

3.1 Prevention

Prevention is to avoid any impacts due to hazards and related disasters. The prevention of disaster-related health effects is mainly due to reducing human exposure to the hazards that may cause illness or injury.

Disaster prevention activities include evaluation and reducing the risk of a potential disaster, identifying disaster prone areas and vulnerable groups and mainstreaming disaster risk management activities into corporate and business planning.

The Ministry of Health will undertake the following prevention activities;

1. Develop a long-term relocation plan for health facilities that are situated in disaster risk zones
2. Build new health facilities away from disaster zones with redesign and modification of facilities to withstand category 5 cyclones and other hazards that could cause threat to health facilities and preventing the provision of quality health services.

3.2 Preparedness

Disaster preparedness involves awareness and understanding of disaster risk management in the community and health staff, as well as developing contingency plans, conducting emergency drills and developing operational plans. Using available information is crucial in predetermining current needs and preparing communities and health staff for future disasters. Effective preparedness reduces the impact of the disaster and increases the resilience of the population.

The Ministry of Health and partners will undertake the following preparedness activities;

1. Conduct a risk or hazard assessment for all health facilities
2. Include disaster risk management into MOH corporate and business plans
3. Establish National and Provincial health disaster committees.
4. Identify and set-upon EOC before a disaster
5. Identify key disaster position holders including clear roles and responsibilities, clear lines of authority and communication, and documented procedures
6. Develop disaster risk management operational plans for Hospitals, provincial health and rural health facilities.
7. Provide education and awareness activities to health staff and communities on what to do before and during a disaster
8. Develop and disseminate information, education and communication materials on disaster preparedness and response activities
9. Build capacity in disaster risk management activities for health facility and management staff
10. Conduct simulation/drill exercises for Hospitals, public health, provincial health, rural health facilities and national emergency operation centres.
11. Allocate annual funds for disaster planning and response under a disaster job code, responsible under the disaster officer
12. Allocate capital funds for preparedness activities
13. Collectively develop stronger partnerships with other clusters, National disaster management office (NDMO), development and implementing partners to harmonise disaster risk management activities and plans

The following sections detail specific important areas for disaster preparedness

3.2.1 Disaster resources and equipment

The MOH and partners will prepare a list of resources and equipment needed for disaster response in all the major health facilities. A list of items is listed in Annex 1.

A resource should be available in a timely manner and should have the capability to do its intended function. Restrictions on the use of resources should be taken into account, and using the resource should not result in negative outcomes.

Each Provincial Emergency Operation Centre should have a disaster kit (Public Health Kits and curative services kits) prepared which is centrally located, contains basic supplies and local resource contacts for staff and equipment. The disaster kit should be checked on a regular basis by Provincial pharmacist or the dispenser so out-dated supplies are removed and restocked.

Please see **Annex 2** for a list of disaster kit contents

3.2.2 Financial preparedness

Key financial preparedness will require:

1. The MOH to liaise with the Ministry of Finance to ensure timely financing for disaster responses.
2. Ready access to funds for disaster activities. This is crucial in the event of a disaster to allow the response to occur effectively.
3. Establishment of a Disaster Cost Centre for use by the National DRMC and MOH Incident Controller.
4. Establishment of a separate Project Account for Disaster Management allowing funds from the recurrent budget to be placed in the account and donor funds to be deposited in the account.
5. Creation of designated LPOs for use by the MOH Incident Controller to be committed in advance for expenditures during the disaster response.
6. Procedures, mechanisms and agreements in place to allow the arrangements in this plan to apply in the event of a disaster.
7. The MOH to establish mechanisms and agreements for post disaster reallocation of expenditures across Departments.

3.2.3 Training and exercises

Training of key personnel is an essential component of disaster planning and preparedness. All personnel involved in a disaster response should have at least the minimum disaster preparedness and response training to understand their roles and responsibilities during a disaster response, and be capable of operating all equipment and performing all duties allocated to them in a safe, timely, efficient and coordinated manner.

Activities will include;

1. Training on the Introduction to Disaster Risk Management for all key disaster position holders including the MOH DRMC or the NEOC.
2. Preparing a priority training program encompassing key issues of Damage and Need Assessment, Managing Emergency Operations Centres and Exercises Management
3. Developing appropriate trainings guidelines for health personnel that are identified as key players in disaster
4. Identifying training opportunities in disaster management for key health personnel both locally and abroad.
5. Trainings guidelines /Manual developed for VanMAT.

3.2.4 Exercises and Response Drills

Exercises and response drills serve to evaluate the thoroughness and effectiveness of the response component of the disaster plan under simulated conditions.

Important elements of response capability to be tested are;

1. The structure and organization of the plans

2. Standard operating procedures for the NEOC, PEOC, Van-MAT and Health Cluster
3. Chain of command and communication channels
4. Equipment capability and availability.
5. Public, industry and media relations
6. Management of increased patient load at health facilities
7. Van-MAT arrangements and deployments.

Types of exercises to be considered include;

1. Table top exercises (a hypothetical scenario conducted inside a conference room)
2. Call-out of personnel who would be involved or contacted during disaster or incident or an event (including other government department officers, Port/Harbor and aviation personnel, voluntarily agencies personnel, etc.)
3. Full scale simulation exercises including exercises conducted in coordination with NDMO and other agencies.
4. Van-MAT Simulation exercises and Drills

A MOH simulation exercise/drill should be held on an annual basis; preferably beginning of every yearsuch exercises should involve the government, NGO and private sectors and aim to further develop these relationships. Responsibility for organizing these in-country exercises rests with the MOH DRMC and Partners. The NDMO is to provide technical advice and assistance in the development, conduct and monitoring of these exercises.

3.2.5 Education and awareness

Disaster risk management activities should be mainstreamed into the health system and health programs. Education and awareness activities on disasters and health should be conducted to health facility staff, colleges and communities. These awareness programs should be developed in close collaboration with the NDMO and other government departments as required.

The integration of disaster issues into health programs should be based on the risks and hazards that will most likely affect communities.

3.2.6 Community preparedness

The MOH needs to work closely with other government Ministries, provincial government, UN agencies, NGOs, and private organizations in dealing with the different hazards to develop appropriate community preparedness programs. The health promotion unit at the MOH should lead and coordinate the development of community specific information, education and communication materials.

All community preparedness programs should aim to educate people to prevent and prepare for disasters before they occur and be resilient, so as to reduce and mitigate impacts, during and after the disaster to limit damage and recover from the disaster.

3.3 Response

Disaster response activities include provision of emergency and public health services during or immediately after a disaster. The Ministry of Health will conduct the following response activities;

1. Coordinate all activities and response actions
2. Communicate with other health partners, provincial health personnel and NDMO
3. Conduct a technical health facility needs assessment
4. Deploy emergency medical teams to most affected areas
5. Set up temporary health facilities where required
6. Coordinate and manage patient referrals and medical evacuations
7. Provide additional Pharmaceuticals and medical supplies to health facilities
8. Scale up the surveillance system to an EWARN system
9. Conduct water quality testing at health facilities With the Water Department
10. Organise and disseminate health promotion materials and activities to health staff and the communities

3.4 Recovery

Disaster recovery includes the restoration and improvement of the health sector, including health services and health systems, livelihoods, infrastructure, rehabilitation and economies that support health towards restoring normality to health services. Efforts to reduce disaster risk factors should also be included in the recovery phase in an attempt to ‘build back better.’

The Ministry of Health will undertake the following recovery activities;

1. Adopt a “Build back better” approach for all infrastructure recovery
2. Provide rehabilitation support for any injured persons
3. Strengthen existing health systems
4. Monitor and evaluate the recovery process



Photo credit:PhilippeMétois/WHO

3.5 Actions for disaster prevention and preparedness

This table identifies the different types of disasters that occur in Vanuatu and describes some actions that the Ministry of Health must do to help prevent and prepare for a disaster.

Table 3.1 Types of disasters and actions to prevent and prepare for disasters

Disaster types	Details
All	<ul style="list-style-type: none"> Establishing evacuation guidelines for hospitals and key health facilities Adhere to National Building Code Act for infrastructure development such as health centers, hospitals and staff quarters Consulting with local communities and departments such as Public Works, DoWR and Meteorology Department prior to the establishment of infrastructures such as health centers, dispensaries and aid posts. Health staff education and awareness on disaster prevention, preparedness, response and recovery plans for each specific disaster Prepositioning of contingency stock at health facilities for disaster situations Increase WASH messaging to prevent food, water and vector borne disease transmission Ensure efficient stock of water purification tablets, soap and H2S testing kits
Cyclones	<ul style="list-style-type: none"> Health facility staff secure and safely store medical supplies and equipment and other fly away items Install cyclone shutters on windows Maintaining good environmental sanitation prior to and during cyclone season Storing adequate water for health facility use before a cyclone occurs
Volcanic eruption	<ul style="list-style-type: none"> Ensure storage of adequate water supplies Covering water sources such as wells, drums and containers Washing of vegetables and other food sources Adhere to NDMO emergency plans for Volcanoes for high risk communities
Earthquake	<ul style="list-style-type: none"> Site buildings or infrastructure away from coast or steep slopes Building homes and residential places on higher grounds Appropriate risk mitigation through community awareness, and construction of safe housing and public buildings

Disaster types	Details
Tsunami	<p>Tsunami contingency plans developed for health facilities located close to the coast</p> <p>Consider relocation of health facilities for high risk areas</p> <p>Tsunami warning system training and education</p>
Flooding	<p>Work with communities in low lying areas and close to bodies of water to develop emergency evacuation plans for heavy rainfall periods</p> <p>Discourage people from going near rivers and low lying areas during heavy rainfall</p>
Drought(El-Nino and La-Nina)	<p>Develop an inter-sectoral awareness program for all communities</p> <p>Educate community on water purification methods</p> <p>Work closely with DoWR and the WASH cluster to identify suitable water resources and to ensure that response are well coordinated</p> <p>Encourage infant and young child feeding practices and counselling to parents</p> <p>Encourage local preservation of food methods</p>
Diseases outbreaks and epidemics	<p>Strengthen and expand disease surveillance activities for increased detection and reporting of potential outbreaks.</p> <p>Finalize and implement outbreak detection manuals and procedures</p> <p>Strengthen links between public health, hospitals, laboratory and provincial health staff</p> <p>Review and establish roles and responsibilities that Environmental Health Officers play at ports of entry.</p> <p>Establish a food recall system for all food products imported into the country</p>
Climate Change effects	<p>Encourage an inter-sectoral program with DoWR to identify sustainable water supply resources to counter drought or El Nino and La Nina.</p> <p>Encourage recycling and waste reduction activities at health facilities</p> <p>The MOH to work with other ministries such as MIPU and VMGD prior to establishment of health centers</p>

Chapter 4. Ministry of Health organizational framework for disaster risk management

4.1 Organisational structure

The organizational structure for the overall health sector disaster management is shown in Figure 1. The structure conforms to the MOH chain of command and communication for disaster preparedness and response.

In the event of a disaster, the DG delegates to the MOH Incident Controller overall command and control of disaster response activities, in consultation with the MOH DRMC. The MOH incident controller will have authority for the coordination, mobilization, direction and control of human, physical and financial resources deemed necessary to respond to a disaster. This will be implemented through the Incident Management System and its five core functions:

1. Management/coordination;
2. Information management and planning;
3. Health operations;
4. Support and logistics;
5. Finance and administration

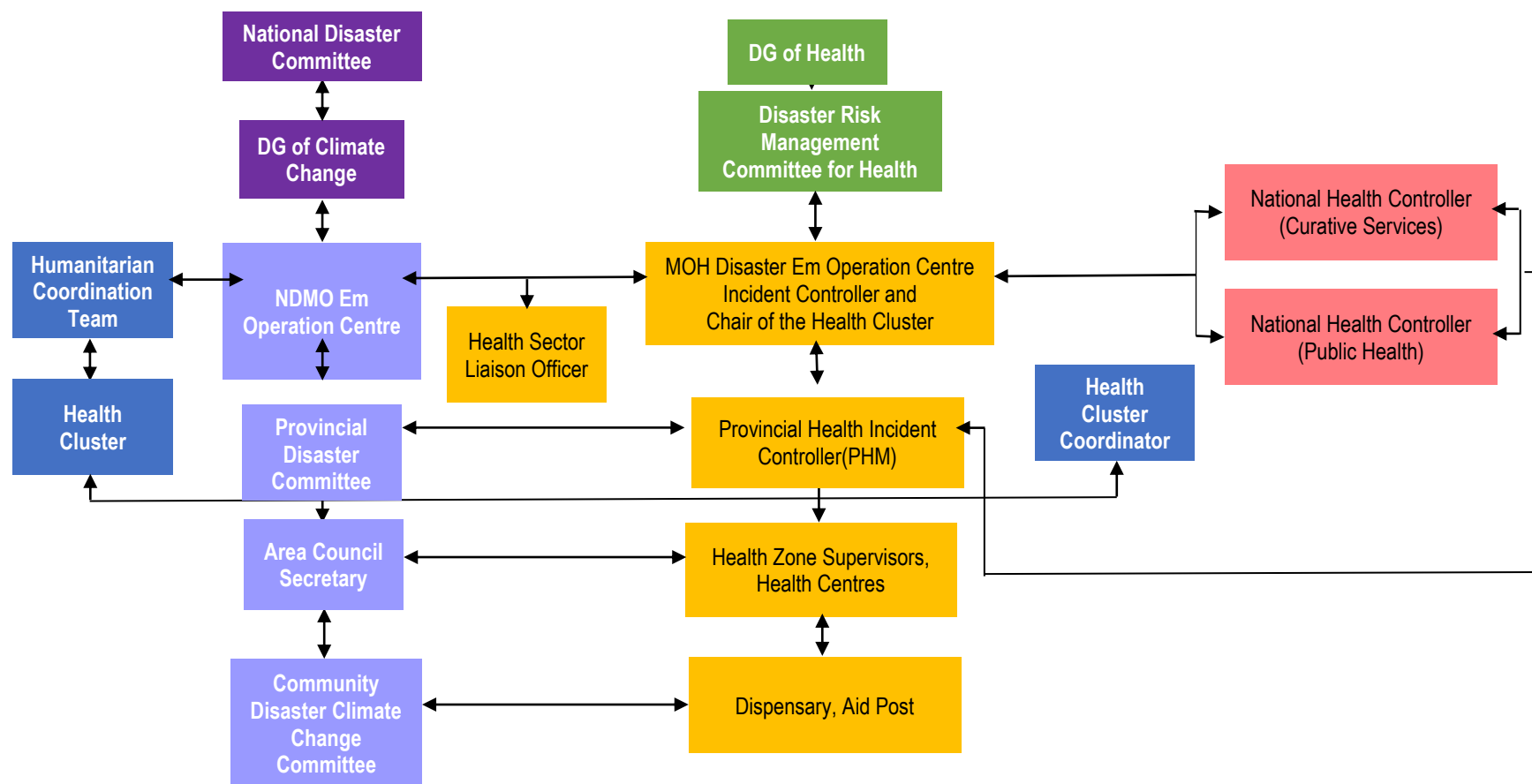
See section 5.4 below for details.

The National Health controllers for public health and curative services will work closely with the MOH Incident controller as well as the Provincial Health incident controller, who has overall command and control of disaster response activities in their province.

The MOH Incident controller will liaise closely with the NDMO and other health partners throughout the disaster response and recovery period.

The chain of command structure should be followed for all information sharing and communication and should flow both up and down the chain.

Figure1. Chain of command and communication for the health sector disaster preparedness and response.



4.2 Provincial chain of command and communication for the health sector

The Provincial Health Administrator is the Provincial health incident controller. The provincial health incident controller is the director of all disaster risk management activities in their province. The incident controller activates the Provincial EOCs and mobilizes the response or recovery during a disaster. The person also liaises with the Health Cluster Chair Directly in provision of provincial sitreps and also follows up on decisions.

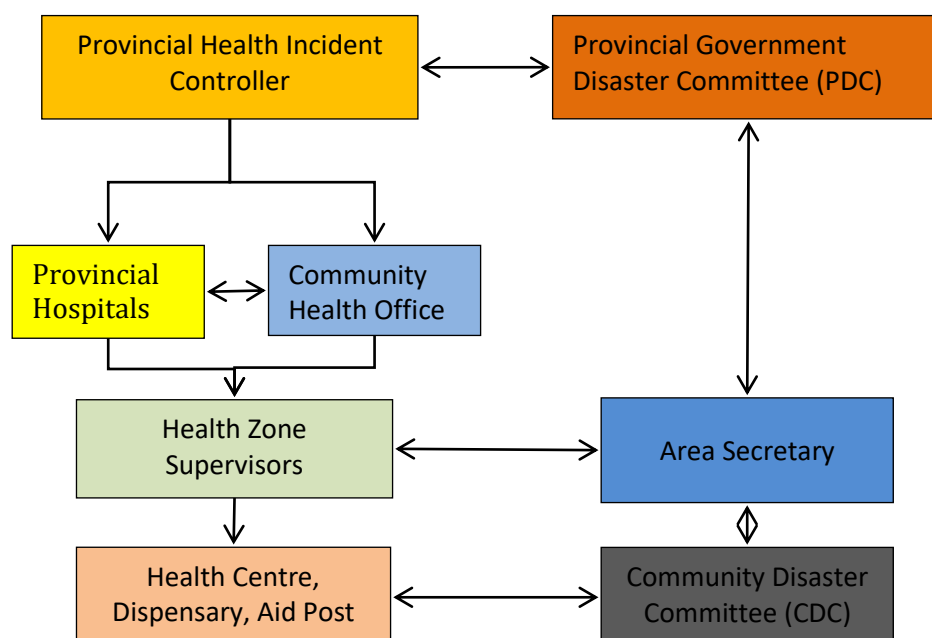
The Provincial health Executive committee will direct health related disaster activities to health zone supervisors and health staff, as well as provide guidance to the Provincial disaster committee as shown in Figure 2.

Each major health facility is to have a local disaster risk management plan that is consistent with the Provincial health disaster plan.

These plans will be:

- Developed by the local health service in consultation with local stakeholders, and overseen by the Provincial health disaster committee
- Reviewed at least once every 2 years or as the need arises
- Include an assessment of local risks, roles and responsibilities and Standard Operating Procedures (SOPs).

Figure 2. Provincial health chain of command and communication



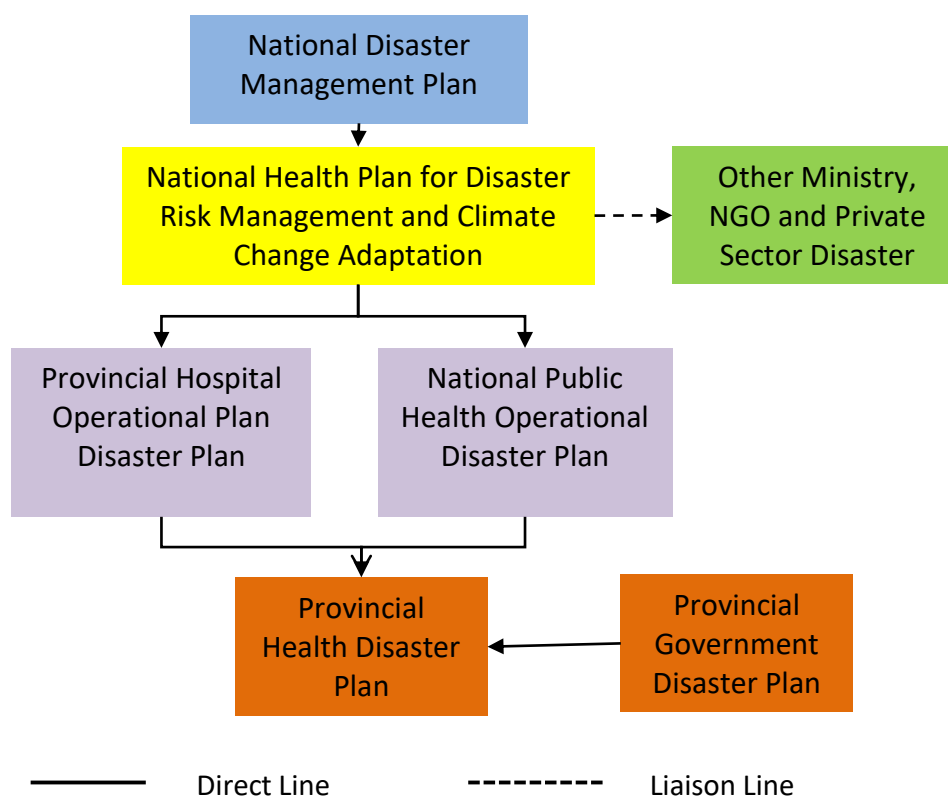
4.3 Relationship of NHP-DRM-CCA to other disaster plans

The Ministry of Health at the national and provincial level will actively maintain awareness and appropriate involvement in the Disaster Management Plans of the NDMO, other Ministries, the private sector and NGOs to ensure expectations of the MOH are maintained and coordination is maximized.

Each province should develop their own Provincial Health Disaster Risk Management Plan which is in line with the National health disaster risk management and climate change adaptation plan. The Provincial Health Disaster plan, which will inform the actions and engagement of the Provincial health disaster committee

The relationship of this plan to other disaster response plans in the MOH and other agencies is shown in Figure 3 below.

Figure 3: Relationship of NHP-DRM-CCA to other disaster plans



4.4 Roles and responsibilities

4.4.1 Ministry of Health disaster risk management committee

The Director General of Health will appoint members of National Emergency Operational Centre (NEOC). The chairperson will be the Director General of Health. The following positions will be the members of the National Emergency Operational Centre (NEOC).

- (i) Director General of the Ministry of Health
- (ii) Director of Planning, policy and corporate services (MOH Incident controller)
- (iii) Director of Public Health
- (iv) Director of curative services and hospital management
- (v) Hospital medical superintendents
- (vi) Ministry of Health Finance representative
- (vii) Provincial public health Administrators
- (viii) WHO representative

The role of the National Emergency Operations Centre (NEOC) is;

- (i) To ensure that the actions and activities of the National health plan for disaster risk management climate change adaptation are carried out,
- (ii) To ensure adequate resources are available to support prevention, preparedness, response and recovery disaster risk management activities,
- (iii) To provide recommendations and advice to the Minister of Health and Director General on health matters related to disaster risk management and climate change adaptation.

The National Emergency Operations Centre (NEOC);

- (i) Developing appropriate strategies and policies and SOPs to prevent, prepare, respond and recover from disasters.
- (ii) Reviewing the National health plan for climate change adaptation and disaster risk management.
- (iii) Review and provide recommendations for disaster management in health legislation
- (iv) Identifying health service resources within the country
- (v) Arrange and conduct disaster training and simulation exercises for health service personnel.
- (vi) Support capacity development of health service personnel in the area of disaster risk management.
- (vii) Provide direction and actions for any disaster response and recovery.
- (viii) Support development and review of provincial health disaster plans and any other local health disaster management plans.
- (ix) Meet at least 4 times a year to discuss any health-related disaster management issues and provide advice to the Ministry of Health on these issues. In the case of a disaster, the MOH DRMC will meet more frequently as directed by the chairperson.
- (x) Review the VanMAT Operational Manual.

4.4.2 Incident controllers

Ministry of Health Incident Controller

Responsible for;

- (i) All phases of disaster management – prevention, preparedness, response and recovery
- (ii) Maintaining the national disaster documentation
- (iii) Representing the Ministry of Health at the NDMO and at other relevant meetings
- (iv) Assessing information regarding disasters and disaster issues and determining and advising on the appropriate Ministry of Health response
- (v) Authorising the deployment of health impact assessment visits to affected health facilities
- (vi) Having authority to command and coordinate health resources within the Ministry of Health to respond and recover from a disaster
- (vii) Establish and manage the operations of the Ministry of Health Emergency operations centre
- (viii) Communication and liaison with the NDMO and NEOC
- (ix) Manage disaster communication to and from other health partners and donor agencies

National Curative Services Controller

Responsible for;

- (i) Ensuring the preparation and maintenance for disaster plans for each hospital and health services in each province
- (ii) Control and operationally manage all clinical health and support services in disaster prevention, preparedness, response and recovery
- (iii) In consultation with the national health disaster committee, deploy clinical response teams to disaster areas
- (iv) Communicate regularly with the national health disaster committee on clinical events and updates

National Public Health Controller

Responsible for;

- i) Ensuring the preparation and maintenance of disaster plans for each section of public health services
- ii) Assuming control and operational management of all public health services and resources in disaster prevention, preparedness, response and recovery

- iii) In consultation with the national health disaster committee, deploy public health response teams to disaster areas
- iv) Communicate regularly with the national health disaster committee on public health events and updates

4.4.3 Temporary positions

The following positions will be considered during a large-scale disaster and appointed by the DG Health upon the advice of the chairperson of the MOH DRMC.

Health Sector Liaison Officer

Responsible for;

- i) Representing the MOH at the NDMO
- ii) Providing NDMO with immediate advice about MOH capabilities and characteristics of the health services
- iii) Keeping MOH DMC advised of developments in the progress of Health disaster response program
- iv) Be a communication link between the MOH DRMC, MOH EOC and the NDMO

Media Officer

Responsible for;

- i) Preparing media briefs, press releases, conferences and other relevant media programs under the instruction of the MoH DRMC
- ii) Advise the MOH on media management and procedures
- iii) Liaison with the media section of the NDMO, and health partners and maintain relations with media partners
- iv) Act as media spokesperson with direction provided by MOH DRMC

Annex 5 contains standard operating procedures (SOP) for each of the above positions in the event of activation of the disaster plan.

Chapter 5. Disaster response operations

5.0 Warning and alerting system

To achieve an effective response, a reliable, understandable and effective warning and alerting system is needed. The warning and alerting system refers to the system in place that is used to warn disaster officials and communities that a potential hazard exists.

Warning and Alerting communication chain:

Official warnings are issued by the Vanuatu Meteorological and Geo-hazards Department to the National Disaster Management Office, other Ministries and stakeholders. The NDMO will then alert and inform other departments, organizations and communities as to the degree of threat and what actions to take.

The MoH Incident controller should immediately communicate this information to the provincial health controllers, who will then inform the health zone supervisors, who will then inform health facilities within their health zone. Communications should follow the disaster chain of command.

Any unofficial reports of potential health risks or emergencies should be verified with Provincial Surveillance Officer. The MoH will alert the NDMO of any situation with potential national health consequences

All hospitals should have a warning and alert system in place for response and evacuations.

5.1 Phases of disaster response

The recognized stages of a disaster response activation to apply to all disaster plans in the MOH are:

- **Readiness / Alert** –When information is received of a likely threat or disaster
- **Standby** – When it is established that a threat exists and it requires staff to make ready to respond
- **Activation** – When the disaster has occurred and deployment of staff and resources is required to respond
- **Stand down** – When the threat has abated and an active response is no longer required
- **Debrief** – When reports are completed and meetings held to review the disaster response

Detailed actions required for each of these phases are outlined in **Annex 4**

5.2 MOHEmergency Operations Centre (MOHEOC)

The MOH and all hospitals will nominate an Emergency Operations Center(EOC) site to be commissioned in the event of disaster response activation. The EOC is to provide for the operational and co-ordination needs of the Incident Controller and assisting staff.

The EOC is to be under the direction of the Incident Controller. A list of items that the EOC is to contain or have readily available is listed in Annex 3.

5.3 Incident Management System

The IMS is a common organizational model for all hazards and emergencies. EOCs play a vital role in the IMS, as they are focal points or hubs for the coordination of information and resources to support incident management activities. Within an IMS, five functions are typically established:

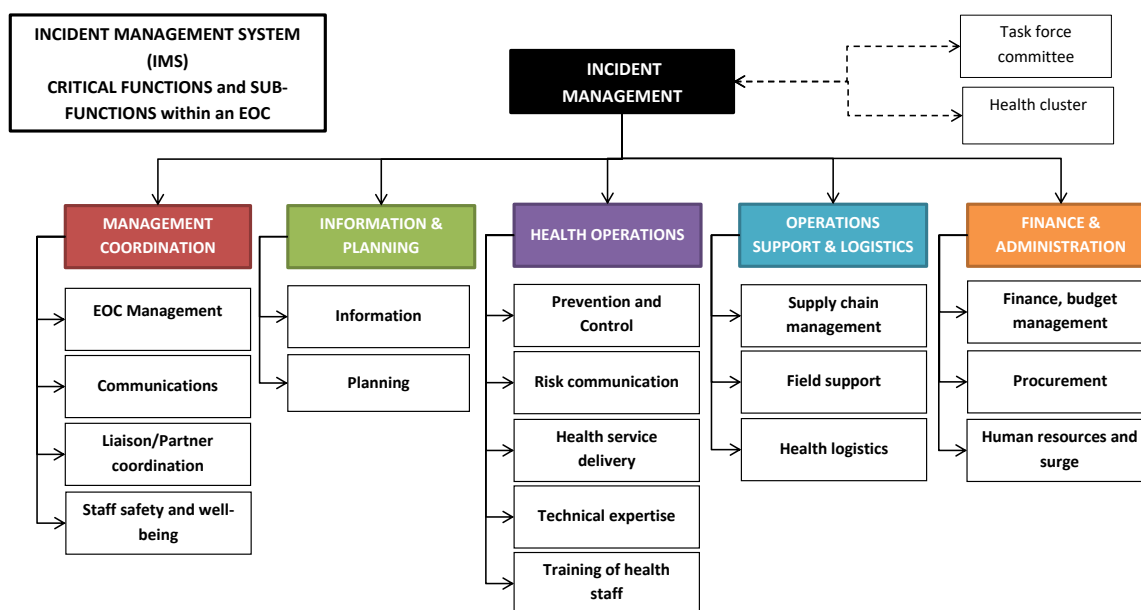
1. Management and coordination
2. Information and planning
3. Operations
4. Logistics
5. Finance and administration.

This five-function IMS model is flexible and can be adapted to individual events, agencies and jurisdictions, whether local, regional, or national, according to needs and available resources.

These functions may be activated or deactivated as needed with the evolution of an event.

Below are organigrams identifying the main IMS functions and sub-functions.

The main responsibilities for each of the sub-functions are outlined to provide guidance as well as the responsible unit or staff. Each province should refer to their own IMS with pre-identified Focal points to be activated at time of emergency. See Annexes for each province.



5.4 Specific disaster response procedures

As disaster plans are developed for specific types of disasters (e.g. cyclones), detailed procedures will be prepared and forwarded to the MOH DRMC for adoption and inclusion as Annexes to this and other MOH DRMCPlans.

This would include specific disaster early warning and alerting signals.

5.5 External Assistance

In the event of a disaster all requests for assistance should be identified by the National Health Incident Controller, who would then consult with the MOH DRMC on identified needs. Requests are to be submitted to the NDMO and NDC. Once such requests are with the NDC, the requests are then forwarded by the NDC to donors both locally and abroad for assistance.

5.6 Financial Responsibility

Expenditure of funds during a disaster is to be met in the first instance by the local health service involved. Should expenditure be of such a magnitude to prevent the provision of normal services for the remainder of the financial year, a request for supplementation is to be made to the MOH.

If as the result of expenditure during a disaster the normal provision of services for a major service (e.g. Hospital) or national program, are not able to be maintained within the MOH annual budget, then the MOH is to make a submission to the NDC for access to the disaster

relief funds and to Treasury outlining the health and service consequences and seeking a budget supplementation.

The MOH should develop mutual aid agreements with other Ministries and procedures for sharing costs and relocation of disaster expenditure to the appropriate Ministry after deactivation has occurred. For example if the MOH needed to pay a contractor to repair a road in order to gain access to a disaster site to deliver emergency care, then post the disaster the Ministry of Public Works should reimburse the MOH.

The MOH should develop agreements with private organizations for provision of supplies, communications or logistics needs.

Provincial governments are to have disaster funds allocated for activities within their province with procedures to allow for timely access to these funds in emergency situations.

To facilitate timely access to funds within the MOH during a disaster, the following arrangements are to apply:

- (i) a “Disaster” cost centre is to be created for emergency situations
- (ii) Agreements are to be reached with suppliers to provide supplies using the LPOs in the event of a disaster
- (iii) The Incident controller can authorize expenditure charged to the “Disaster” cost centre in event of a disaster

5.7 Post disaster review

After a disaster, debrief meetings and a national health lessons learned workshop should be conducted. This workshop will assess the health system response to identify gaps and constraints and provide recommendations for future planning and response.

Key areas to be discussed are;

- i) Assessing the efficacy of the NHP-DRM-CCA,
- ii) Identifying organizational deficiencies,
- iii) Recommending changes to the procedures, skills, equipment, or organizational arrangements
- iv) Making any changes to existing plans and procedures to improve effectiveness

5.8 Ministry of Health contact details

Each MOH Disaster Plan is to contain a list of relevant MOH and other agency contact details, including the following:

- i) Disaster position holders
- ii) Members of the MOH DRMC
- iii) Key health facility staff
- iv) Government agencies including NDMO and emergency service providers
- v) Key provincial government persons
- vi) NGO organizations
- vii) Private sector stakeholders
- viii) Medical doctors both within the MOH and private practitioners

Contact lists are to be updated on a 6-monthly basis.

Chapter 6. Disaster recovery

The disaster recovery period may take many months to years to complete.

The MOH DRMC will meet regularly during the recovery phase to;

- i) Monitor the need for the MOH to make an appropriate contribution to the wider community recovery effort
- ii) Identify the impact the disaster had on community health status
- iii) Identify the impact the disaster had on the health service's ability to function and deliver core services
- iv) Advise the Director General on action to address the recovery of the community and Health Service

The MOH should be represented on the National Disaster Recovery Committee, and maintain regular contact with its officer bearers.

Where local disaster recovery committees exist the local disaster, Controller should be involved with the committees.

Chapter 7. Disaster work plan

The NHP-DRM-CCA will require continual action to implement, update and maintain.

Annex 6 contains a twelve-month implementation and maintenance plan comprising the key actions arising for each section of this document.

Annex 1 - Disaster operational resources and equipment

These resources include, but are not limited to, the following:

- The location, quantities, accessibility, operability, and maintenance of equipment (e.g. equipment, personal protective clothing, transportation, monitoring, decontamination)
- Supplies (e.g., medical, personal hygiene, consumable goods, administrative)
- Sources of energy (e.g., electrical, fuel, solar, generators)
- Communication systems
- Food, water
- Technical information
- Clothing
- Shelter
- Specialized personnel (e.g., medical, religious, volunteer organizations, disaster/emergency staff, utility workers, morticians)
- Specialized volunteer groups (e.g., Red Cross, religious relief organizations, charitable organizations)
- International aid agencies

Annex 2 – Disaster Kit contents

- Torch and spare batteries or other emergency lighting
- First aid kit
- Water purification tablets
- Emergency contact list
- Drinking water
- Dried or canned food
- Knife or machete
- Matches, lighter
- Waterproof jacket
- Spare clothing
- Mobile phone
- Digicel and TVL phone credit

Annex 3 - List of items the Ministry of Health Emergency Operations Centre should contain;

The MOH EOC is to contain or have readily available;

- Computers and laptops
- Internet connection
- External Phone
- Mobile phone with phone credit
- Satellite phone
- Photocopy machine
- Printer and scanner
- Copy of MOH Disaster Plan and all Operational Unit Disaster Plans
- Up to date list of contacts for all health facility staff, private practitioners, cluster leads, heads of agencies, NDMO, VMPF
- Health facility technical assessment forms
- Up to date health facility register with details on infrastructure, human resources, GPS locations
- Large White board
- Stationaries
- Usb storage devices
- First Aid kit
- Maps of the geographical area with all health facilities identified and mapped with GPS coordinates
- Tables and Chairs
- VHF radio
- Torch and spare batteries
- Drinking water
- Fridge and coffee/tea making facilities
- Toilet with hand washing basin and soap
- Generator with fuel
- Lighting
- Spare cables
- Alternate power supply (ie portable solar panels)
- Multi-boards
- Maps with population information, health facilities, communities and sizes, educational facilities.

Annex 4 - Standard operating procedures for disaster activation response

Readiness/Alert Stage

- Incident Controller notified of situation;
- Incident Controller notifies Director General Ministry Of Health;
- Incident Controller Activates Ministry Of Health Disaster Plan to Readiness/Alert stage;
- Incident Controller contacts other controllers to be ready;
- Initiate protective advice to relevant health services and health centre's;
- Contacts National Emergency Operations Centre (NEOC);
- Incident Controller monitors situation.

Standby Stage

- When disaster assessed as imminent the Incident Controller activates the Standby Stage, and notifies other Controllers, Director General and NEOC;
- MOH EOC made operational, and communication equipment tested;
- MOH EOC staff report to the MOH EOC;
- Staff prepared for deployment, including notification of standby staff and preparation of a roster for relief staff;
- Assets/equipment/resources likely to be needed are assembled, stored, checked, are made ready for deployment (including vehicle fuelling; medical supplies stocked);
- Adjoining health services not likely to be affected are notified so that preparation for relief and support role can commence when required;
- MOH Liaison Officer reports to the NEOC.

Activation Stage

- When disaster underway, the Incident Controller activities the call out phase, and notifies other Controllers, Director General, NEOC;
- MOH EOC readied to receive requests for assistance;
- Active monitoring of response occurs;
- Records of requests, response, expenditures are commenced at the MOH EOC
- Deployments commence under the control of the Incident Controller;
- Other Controllers provide regular feedback reports;
- Release staff not needed in the immediate but maintains means of call back
- Regular information, updates, media releases are prepared.

Stand-down stage

- In consultation with the MOH DRMC and NEOC, when the Incident Controller determines activation is no longer required, a "stand-down order" is issued;
- The Incident Controller notifies all other controllers, Director General and NEOC;
- Incident Controller advises the MOH DRMC on actions that are to remain to respond to recovery operations;
- All information and records are collected and filed in a systematic manner
- MOH EOC deactivated and closed;
- Time and place identified for debriefs and lessons learned meetings
- Incident Controller arranges for preparation of a disaster repo

Annex 5 - Standard operating procedures for key disaster position holders in disaster response

Incident Controller

- Determine requirements and monitor operations;
- Activate Operations /Deactivate Disaster Plan;
- Alert Clinical and Public Health Controllers;
- Ensure other controllers are alerted and nominated;
- Notify the MOH DMC and Director General of Health;
- Notify the NDMO
- Operate the MOH EOC;
- Nominate a relief/acting incident Controller if needed;
- Notify all Health Services;
- Nominate Liaison Officers and Media Liaison Officer;
- Manage assistance requests;
- Co-ordinate provision of responses;
- Ensure Health Services, and communities are kept advised and informed about health protection;
- Provide regular updates to Director General and NDMO;
- Approve deployment of resources;
- Approve expenditure to Disaster Cost Centre;
- Arrange debriefing;
- Prepare post disaster report.

Other Disaster Controllers

- Assume responsibility of the service, and line management functions;
- Bring service to the appropriate stage of activation;
- Develop appropriate disaster response, within the immediate resources available and ensuring appropriate safety of staff;
- Assess additional resource needs;
- Make resource and assistance request to MOH EOC;
- Enact directions of the Incident Controller;
- Confer with other commanders to develop and implement appropriate response action;
- Attend to crowd control situations;
- Maintain feedback and report to the MOH EOC;
- Monitor Staff fatigue and relief requirements;
- Prepare disaster report after deactivation and forward to the Incident Controller.

MOH Liaison Officer

- On activation of Disaster Plan to “Stand by” proceed to the MOH EOC;
- Report to Disaster Controller for briefing and directions;
- Collect and test communication system for reporting to Disaster Controller;
- When directed by Incident Controller, proceed to NEOC and report to National Disaster Controller;

- Establish liaison relations with counter parts;
- Report all requests for MOH action/assistance to MOH Disaster controller in a timely fashion;
- Keep communications open with other counter parts;
- Regularly brief the Incident Controller.

Media Officer

- On activation of the Disaster Plan to “Stand by” proceed to the MOH EOC;
- Report to the Incident Controller for briefing and directions
- Establish contact with
 - Media
 - NEOC media component;
- Prepare media releases as requested by the Incident Controller;
- Inform and advise the Incident Controller of media requests;
- Organize medias conferences;
- Brief technical spoke persons with delegation from the Incident Controller;
- Arrange for management of family and relatives requests for information;
- Manage family and relative who appear at MOH EOC seeking information;
- Attend NEOC as requested by the Incident Controller;
- On deactivation, prepare a report on media management issues during the disaster and forward to the Incident Controller.

Annex 6. Ministry of Health Disaster Work plan 2021- 2025

				Year of implementation	
Activities	Indicators	Persons responsible	Budget	2021	2025
Prevention and preparedness					
Integrated and strategic risk assessment of public health threats workshop	Integrated and strategic risk assessment workshop undertaken	Disaster Officer, MOH		May	
National Health Disaster Risk Management and climate change adaptation plan finalized draft sent to PHM and partners for final comments	Final comments received for NHP-DRM-CCA	WHO advisor		April	
NHP-DRM-CCA finalized and endorsed by the MoH Executive for dissemination	NHP-DRM-CCA endorsed copy distributed to all partners and stakeholders	WHO advisor		May	
Appointment of a national health DRM committee	National health DRM Committee established	DG		May	
Appointment and training of national health disaster controller positions	Disaster controllers appointed and aware of their roles and responsibilities	MOH Disaster Officer		May	
The National disaster management committee meet every quarter	Meeting minutes produced every quarter	Health Cluster Chair.		May	
Field testing of technical health assessment form	Field testing on assessment form completed	Nellie Ham		June	
Training on technical health assessment form to key health staff	Training on assessment form completed	Nellie Ham		July	
Financial arrangements made with the Ministry of Finance for a disaster cost center with fast processing procedures	Disaster cost center established with fast procedures identified	FinanceManager		July	
Review and finalization of role delineation policy for health facilities including disaster response and coordination functions	Role delineation policy finalized and endorsed by the MoH Executive committee	Planning Unit		Nov	

				Year of implementation	
Activities	Indicators	Persons responsible	Budget	2021	2025
Disease outbreak surveillance systems established and staff trained at National and provincial level	Surveillance officers trained	Surveillance team and Senior Disaster Officer		May	
Health facility database and register updated yearly (designation, staffing levels, equipment, structural status, location)	Health facility database register updated	Assets Unit & Planning Unit		Dec	
Annual training for health facility staff in disaster preparedness and response	Annual training conducted	EMT /VANMAT Coordinator		Aug	
Disaster contingency stock prepositioned at key health facilities	Stock prepositioned at key health facilities	Assets Unit and CMS		July	
Disaster simulation exercise and drills conducted at national level	Disaster simulation exercise attendance list	VANMAT Coordinator		Sept	
MoHEoC equipment prepositioned including emergency communication equipment	National EoC stock prepositioned	VANMAT Coordinator		July	
Key community health education messages for different hazards developed and disseminated	Health education on disaster materials printed and distributed	Health promotion team		June	
Establishing links and agreements with the private sector for emergency times (e.g. logistics, supplies, communications)	Agreements drawn up with private sector partners	AMU		June	
VCH disaster risk management plan finalized and disseminated	VCH plan distributed to all partners	ALL Medical Superintendent.		Oct	
Response					
Activation of the Health and Nutrition cluster before disasters (if known) or immediately afterwards		Health Cluster Chair		In event of disaster	
Health sector liaison officer role activated for links between MoH and NDMO		Health Cluster Chair.		In event of disaster	

				Year of implementation	
Activities	Indicators	Persons responsible	Budget	2021	2025
Ongoing engagement and participation with the NDMO, other clusters and VHT		Health Cluster Chair		As directed, post disaster	
Communication with Provincial health disaster controllers		Health Cluster Chair		In event of disaster	
CDCCC initial rapid assessment conducted		NDMO		First 72 hours	
Detailed health facility assessment completed through provincial health controllers		Health Cluster Chair		Within 2 weeks	
Health and Nutrition cluster to provide information as required by the NDMO		Health Cluster chair		As directed, post disaster	
Disease outbreak surveillance system scaled up to the EWARN system		Surveillance team and Disaster Officer		As required, post disaster	
Ensure all information is channeled through the Health and Nutrition cluster to the NDMO and provincial health teams		Health Cluster Chair		Ongoing	
Ensure health facilities are staffed and operating with rotating staff roster initiated				In event of disaster	
Foreign medical teams and emergency response teams quickly deployed and reporting through the MoH and provincial health team if required		ALL Medical Superintendent		In event of disaster	
Initiate infrastructure repairs on health facilities where appropriate		Recovery Team DSSPAC		As required, post disaster	
Recovery					
Establish policies and processes for a build back better approach		ViranTovu		Pre-disaster period	

Activities	Indicators	Persons responsible	Budget	Year of implementation	
				2021	2025
Confirm health facilities status and list of priority repairs and sites		Assets Manager		Towards end of response phase	
Conduct a lessons learned workshop with all health partners		National Health Disaster Officer.		Towards end of response phase	
Develop costed recovery plans for the health sector		DSSPAC and MOH Planning Unit.		Towards end of response phase	
Implement recovery plans, monitor and report progress		DSSPAC and MoH Executive.		Towards end of response phase	

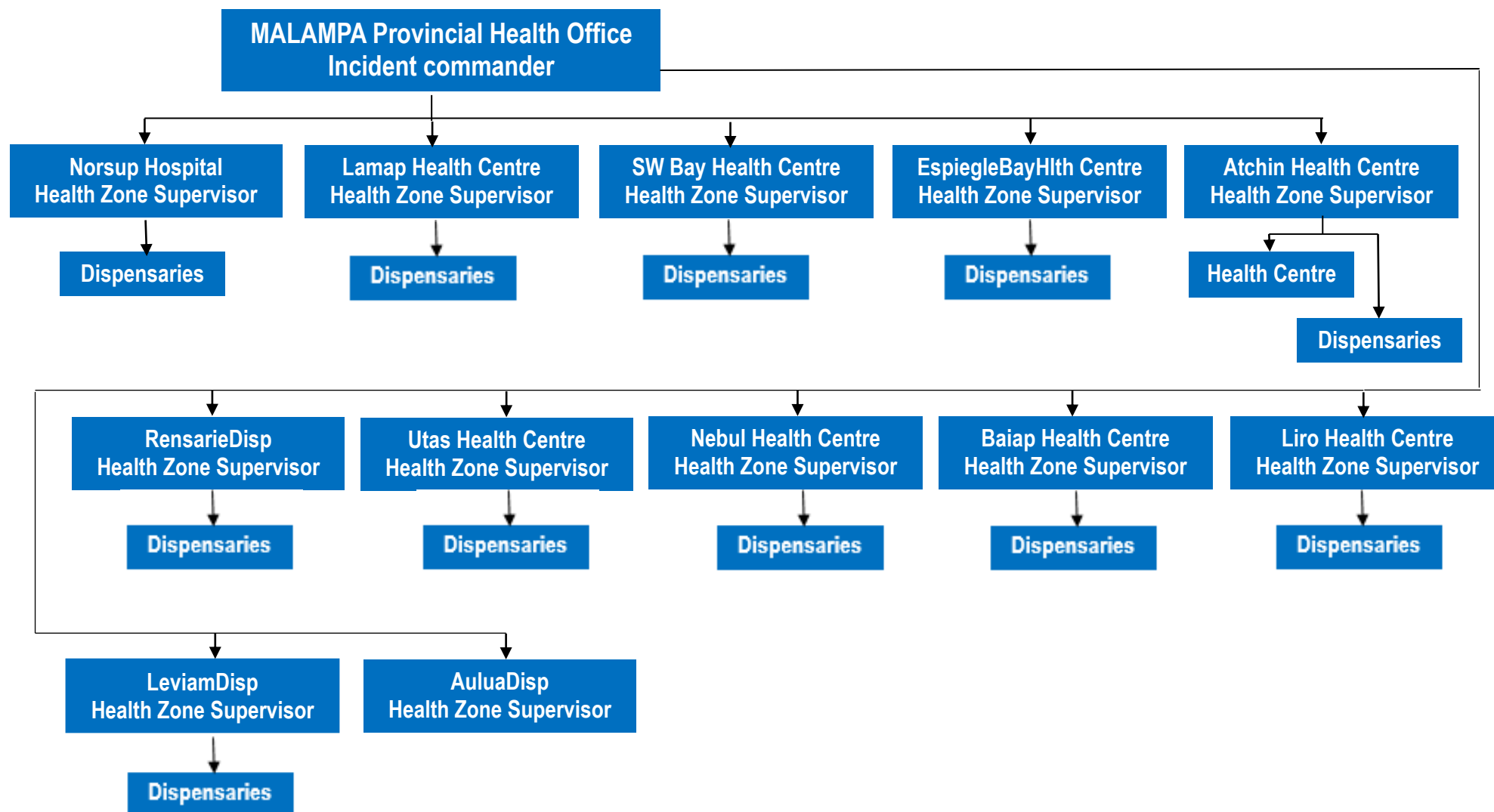
Annex 7. Disaster risk management for health provincial profiles and planning (This information should also captured inside provincial health disaster plans).

A2.1: MALAMPA Province

Table A2.1: Risk Profile and Rating

Disaster type	Risk rating	(Likelihood/Impact)
Cyclones (Typhoons)	12-20	(4 / 3-5)
Volcanic eruption	9-12	(3 / 3-4)
Earthquake	9-16	(3-4 / 3-4)
Tsunami	9-16	(3-4 / 3-4)
Flooding	9	(3 / 3)
Drought	16	(4 / 4)
Diseases outbreaks and epidemics	9-12	(3 / 3-4)
Climate Change (effects of)	12-16	(4 / 3-4)

Figure A2.1: Disaster Risk Management Organogram: MALAMPA



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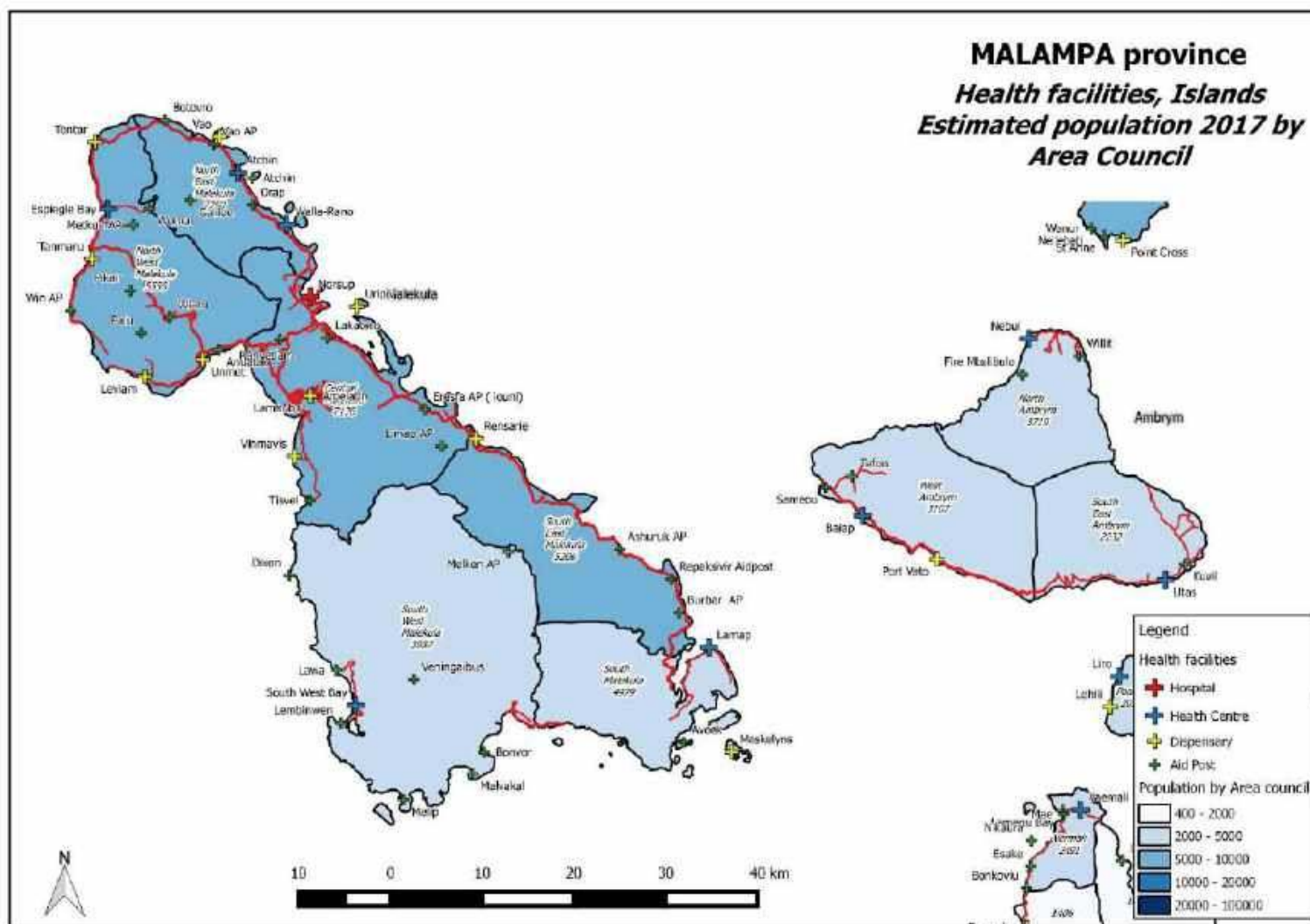


Table A2.2: Emergency contact details for Provincial Health Managers, health facility managers/staff and Area Secretaries.

Island	Health Zone	Facility Name	Facility Type	Provincial Health Officer in Charge			Area Secretary		
				Name	Position	Contact	Area Council	Name	Contact
Malekula	MAL01	Norsup Hospital	Provincial Hospital	Kepoue Andrew	Provincial Health Manager	5487005	Central Malekula	Lawrence Malres	7104802
				Elsmo Bani	Provincial Health Administrator.	5721591		Abelson Abel (Provincial disaster officer)	5492531
				GrennethyTavunwo	Health Promotion Officer	5976158		Kevin Enrel (Chairman of provincial health committee)	5448835
		Uripiv	Dispensary	Delwin Bob	Nurse Aid	7774676 5905425			
		Amelatin (Lambubu)	Dispensary	Onorine Hosea	Nurse Aid				
		Vinmavis	Dispensary	Rebecka Frank	Registered Nurse	5640080			
	MAL02	Rensarie	Dispensary	Lorna Tasso	Midwife	5372696			
		Tisman	Dispensary	Roslyn Tete	Nurse Aide	5676958/ 5673327			
	MAL03	Aulua	Dispensary	JilianKalmsel	Registered Nurse.	5483007	South East Malekula	Edwin Manron	5367956
	MAL04	Lamap	Health Centre	Dr Willie Karlbule	Medical Officer	5735709 7716794	South Malekula	Lulu Leymang	5959552
				Samuel Bongnaim	Nurse Practitioner				
		Maskelynes	Dispensary	NinahNagof	Registered Nurse	5361713			
		Akamb Island	Dispensary	Hidrif Frank	Nurse Aide	7103201			
	MAL05	SW Bay (Wintua)	Health Centre	Marie Biakge Kollan Rolland	Registered Nurse Registered Nurse	5643110 5486357	South West Malekula	Penson Willie	5372342
		Carolyn Bay	Dispensary	Angela Malai	Midwife	5378290			
	MAL06	Unmet	Dispensary	Julie paniel	Registered Nurse	7382979	North West Malekula	WeslyLamby	5348814
		Leviam	Dispensary	Aline Niptick Nicole Tullili	Nurse Aide Registered Nurse	No network			
	MAL07	Espiegle Bay	Health Centre	TimaChire	Nurse Aide	No network			
		Tontar	Dispensary	Collette Kaku	Midwife	5682244			
		Tanmaru	Dispensary	Roselyn Cyrus	Registered Nurse	7108384			
	MAL08	Atchin (Mainland)	Health Centre	Kenneth Philip	Registered nurse	5999277	North East Malekula	TasoKelep	7736477
		Wala-rano	Dispensary	GuenolaLesines	Registered Nurse	5417099			
		Vao (Island)	Dispensary	Isabelle Rory	Midwife	5481357			
Ambrym	MAL09	Utas	Health Centre	Dr Vega T Steve Taynambi	Medical Officer	73094913 7363036	South East Ambrym	Kirby Norman	5657682

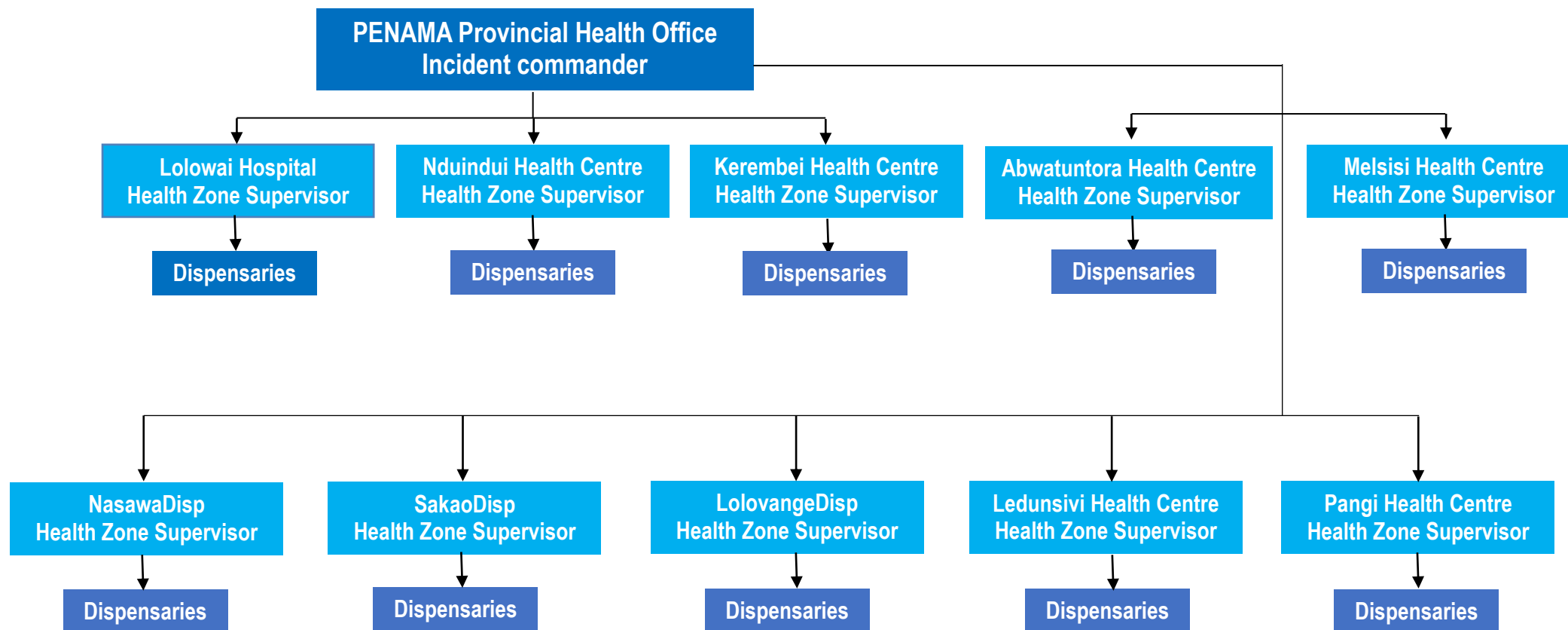
Island	Health Zone	Facility Name	Facility Type	Provincial Health Officer in Charge			Area Secretary		
				Name	Position	Contact	Area Council	Name	Contact
					Registered Nurse				
		Endu	Dispensary	Ruth Enock	Nurse Aide				
		Sameou	Dispensary	Saksak Peter	Nurse Aide	5346467			
	MAL10	Nebul	Health Centre	Emon John	Registered nurse	5473862 7315267	North Ambrym	Jackson Willie	5937175
		Olal	Dispensary	FlorainAtingting	Nurse Aide		West Ambrym	Bong Masing	5902191
	MAL11	Baiap	Health Centre	Charlotte Lingbu Abel Merani	Midwife Registered Nurse	5610996 7713704			
		Melumlum (Pt Vato)	Dispensary	Brenda Biento	Nurse Aide	TBA			
Paama	MAL12	Liro	Health Centre	miltonBuka. Billy Tasso	Registered Nurse Nurse Practitioner	5633970 5395455	LiroPaama	Sairus Willie	5347850
		Lehili	Dispensary	Anna Jack	Registered Nurse	5401899			

A2.2: PENAMA Province

Table A2.3: Risk Profile and Rating

Disaster type	Risk rating	(Likelihood/Impact)
Cyclones (Typhoons)	12-20	(4 / 3-5)
Volcanic eruption	9-16	(3-4 / 3-4)
Earthquake	9-16	(3-4 / 3-4)
Tsunami	9-16	(3-4 / 3-4)
Flooding	12	(4 / 3)
Drought	20	(5 / 4)
Diseases outbreaks and epidemics	9-12	(3 / 3-4)
Climate Change (effects of)	12-16	(4 / 3-4)

Figure A2.3: Disaster Risk Management Organogram: PENAMA



PENAMA province

*Health facilities, Islands
Estimated population 2017 by
Area Council*

Legend

Health facilities

- Hospital
- Health Centre
- Dispensary
- Aid Post

Population by Area council

- 400 - 2000
- 2000 - 5000
- 5000 - 10000
- 10000 - 20000
- 20000 - 100000

Table A2.4: Emergency contact details for Provincial Health Managers, health facility managers/staff and Area Secretaries.

Island	Health Zone	Facility Name	Facility Type	Provincial Health Officer in Charge			Area Secretary		
				Name	Position	5373358	Area Council	Name	Contact
Ambae	PEN01	Lolowai	Provincial Hospital	Markleen Tagaro	Provincial Health Administrator.	5726195/ 7728074	East Ambae (LungeiTakaro)	Morris Tari	7114012 5474688
				Dr Donald Tangis	Medical Superintendent				
				Bevely Tosiro	Act. Nursing Services Manager.				
		Naleleo	Dispensary	Vacant			West Ambae (Tokatara)	Edmon Hoke	7114014 5912291
	PEN02	Nduindui	Health Centre	Esther Aru	Midwife	5638161			
		Manns/Walaha	Dispensary	LetleyArukesa	Registered Nurse				
	PEN03	Vandue	Dispensary	Jacky Bani	Nurse Aide	7102611	North Ambae (VatuboebuleiTagaro)	Stanley Ngwele	7114013 5670389
		Lolovange	Dispensary	Hitler Garae	Registered Nurse	7710063			
		Lolopuepue	Dispensary	GregorieTahi	Registered Nurse	7742516			
	PEN04	Sakao	Dispensary	Banabus Tari	Nurse Aide	5683939	South Ambae (Vatueulu)	Tari Titus	
Maewo	PEN05	Kerembei (Kerepei)	Health Centre	Steven Leo	Registered Nurse	7792019	North Maewo (Banganvanua)	Nanu Bani	7113985
		Naviso	Dispensary	Nicholas Toko	Nurse Aide.				
		Neyroro (Lelevia)	Dispensary	Vacant					
	PEN06	Nasawa	Dispensary	Mary Boe	Registered Nurse	5442075	South Maewo (Roronda)	DensleyVuti	7113987 5349569
Pentecost		Asanvari	Dispensary	Lizzie Vari	Nurse Aide		North Pentecost (Vatunmalanvanua)	MasdenRongo	5376574 7113982
	PEN07	Abwatuntora (Mauna)	Health Centre	Hellenson Gao	Midwife	7311089			
		Angoro	Dispensary	Grace Hinge	Registered Nurse	5385030			
		Aute	Dispensary	Nadia Ala	Registered Nurse	5678589			
		Lotong (Latano)	Dispensary	Maria Tevi	Registered Nurse	5343054			
		Tari-Ilo (Nabarangiut)	Dispensary	Michael Sine	Nurse Aide				
		Aligu	Dispensary	RolengasBogilu	Registered Nurse	7303499/ 5351640			
	PEN08	Namaram	Dispensary	Nicholas Bage	Registered Nurse		Central Pentecost 1 (Suru)	Kerry Tabi	7113983 5416001
		Bwatnapni (Bwatnavni)	Dispensary	Pollyfay Hinge	Nurse Aide				
		Ledungsivi	Health Centre	Mathias Tabeva	Nurse Practitioner	5945117			

Island	Health	Facility Name	Facility	Provincial Health Officer in Charge			Area Secretary		
		Enkul	Dispensary	Pricilla Buleuru	Registered Nurse	5418107	Central Pentecost 2 (Ulinsalean)	Esline Mabone	7113984 5604726
		Vanmamla (Lesasa)	Dispensary	Vacant					
	PEN09	Melsisi	Health Centre	Lawrence Tabi	Nurse Practitioner	7342001/ 7760498			
		Tsimbwege	Dispensary	Noe Tamtsue	Registered Nurse		South Pentecost (Malbangbang)	Robinson Tema	7114017 5402426
		Ranmawat	Dispensary	Kaylin Tabi	Registered Nurse	7336425/ 7737696			
	PEN10	Baie Barrier	Health Centre	Anita Bulere	Nurse Aide				
		Pangi	Health Centre	Julie Toalak	Registered Nurse	5662171			
		Point Cross	Dispensary	Ju Georgina Bule	Registered Nurse	5980561			

A2.3: SANMA Province

Table A2.5: Risk Profile and Rating

Disaster type	Risk rating	(Likelihood/Impact)
Cyclones (Typhoons)	12-20	(4 / 3-5)
Earthquake	9-16	(3-4 / 3-4)
Tsunami	9-16	(3-4 / 3-4)
Flooding	16-20	(4-5 / 4)
Drought	12	(3 / 4)
Diseases outbreaks and epidemics	12	(3 / 4)
Climate Change (effects of)	16	(4 / 4)
Urban disasters	12-15	(3 / 4-5)

Figure A2.5: Disaster Risk Management Organogram: SANMA

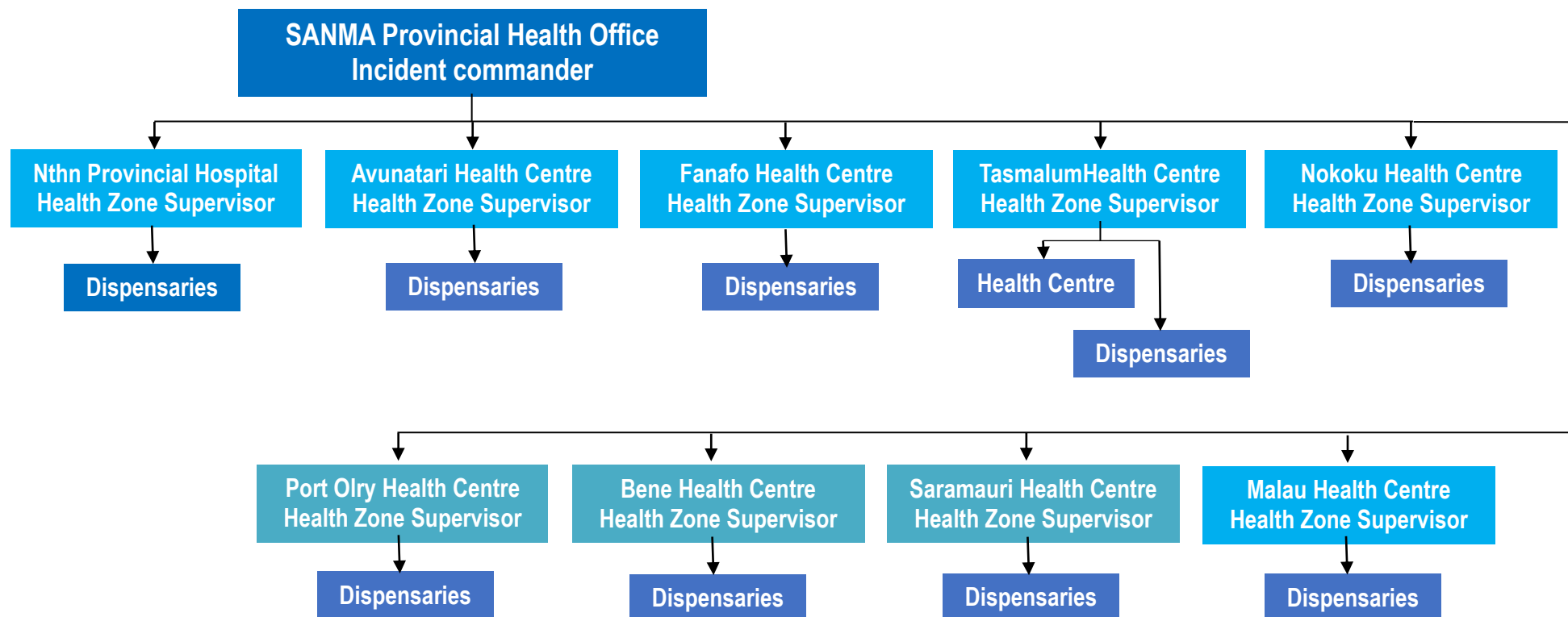


Figure A2.6: SANMA Province Map Detailing Health Facilities, Islands Estimated Population 2017 by Area Council.

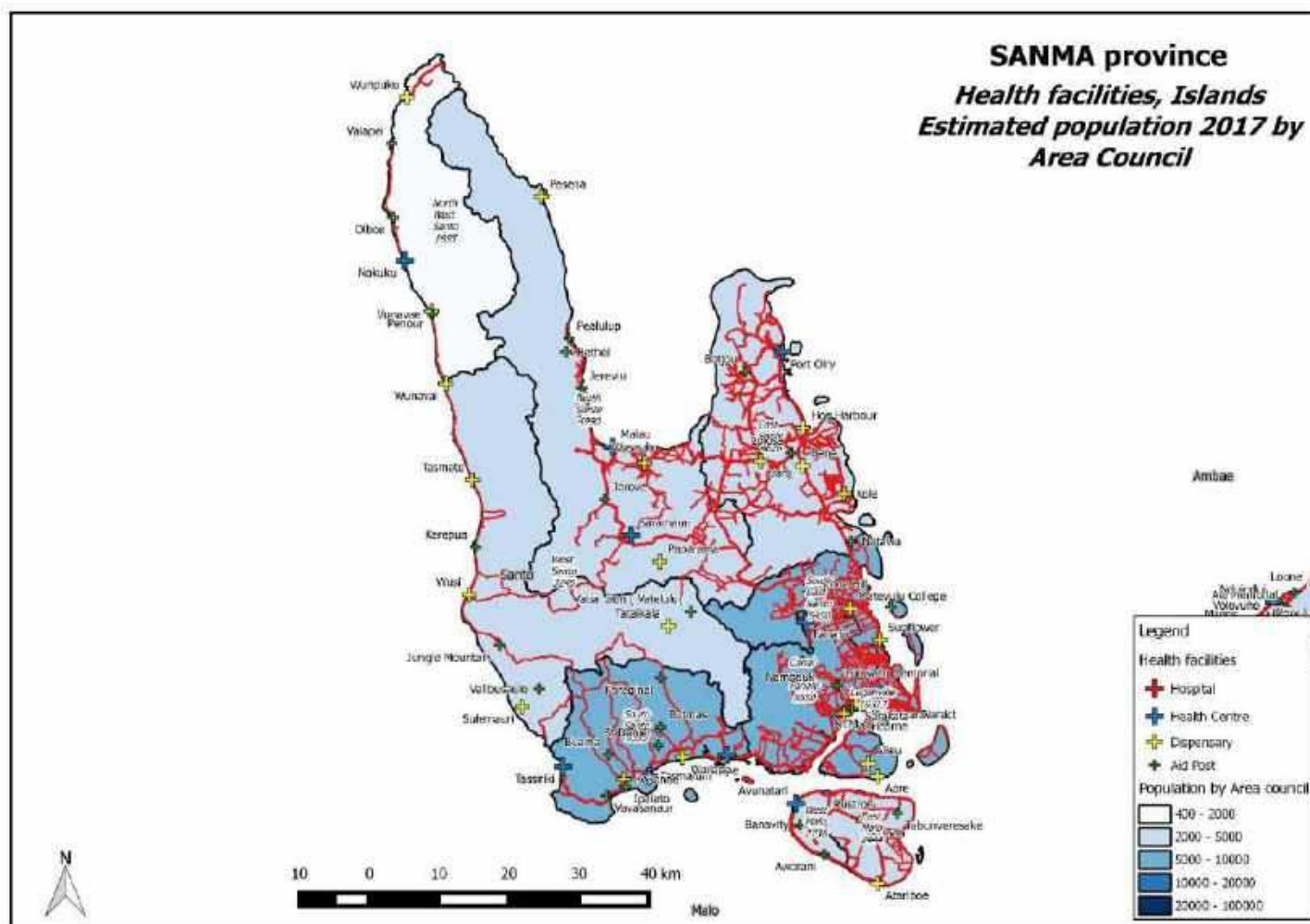


Table A2.6: Emergency contact details for Provincial Health Managers, health facility managers/staff and Area Secretaries.

Island	Health Zone	Facility Name	Facility Type	Provincial Health Officer in Charge			Area Secretary		
				Name	Position	Contact	Area Council	Name	Contact
Santo	SAN01	SANMA Rural Health	Office	Marie France Maleb	Acting Manager	770719	Luganville	KalfaoLum	
		Northern Provincial Hospital	Provincial Hospital	Andy Ilo	Medical Superintendent	7730804			
Malo	SAN02	Avunatari	Health Centre	Steve Vire	Nurse Practitioner	5689271	East Malo	MalonRasu	5445266
		Atariboe	Dispensary	Loline Tari	Nurse Aide	5347624			
Aore		Aore	Dispensary	??	Registered Nurse		Aore	VutiMuele	5536726
Santo	SAN03	Fanafo	Health Centre	Willie Tangis	Nurse Practitioner	5402894	South East Santo	Peter James	7100919
	SAN04	Vulesepe	Dispensary	Keren Quai	Registered Nurse	5685016	South Santo – Area 1	Mckravet Leon	5546330
		Tasmalum	Health Centre	Pierre Paul Erimel	Nurse Practitioner	5685016/5433450			
		Tataikala	Dispensary	Jean Marie Vira	gReistered Nurse	5902991/7779764	South Santo – Area 2	VutiTagasi	5546335
		Wailapa (Isu)	Dispensary	Rachel Revevuro	Midwife	5377853/7374431			
	SAN05	Sulemauri	Dispensary	Meriamerouppoune	Nurse Aide	7375242	West Santo	Suluvania Henry	No reception
		Tassiriki	Dispensary	Marian Lulu	Registered Nurse	5914717			
		Wusi	Dispensary	JinoMwai	Nurse Aide	No network	North West Santo	Baia Saul	
	SAN06	Nokoku	Health Centre	Avock Isaac	Nurse Practitioner	No network			
		Wunpuku	Dispensary	Glenys Tari	Midwife	7746727	North Santo – coast	Remy Packet	5400924
		Tasmate	Dispensary	Kenneth	Nurse Aide	No network			
	SAN07	Malau	Health Centre	Amos Tabi	Nurse Practitioner	5970887	North Santo – bush	Paul Mark	5459168 (only text)
		Pesena	Dispensary	Thomas Lapasi	Registered Nurse	5615450			
	SAN08	Saramauri	Health Centre	Manuel Wokeke	Nurse Practitioner	5490293	East Santo	Michel Tomker	5546332
		Paparama	Dispensary	Samuel George	Nurse Aide				
		Woramauri	Dispensary	Nichole Ravupay	Nurse Aid				
	SAN09	Bene	Health Centre	Marie Estelle Naru	Nurse Aid	5345085			
		Port Olry	Health Centre	Radiant Stanley	Registered Nurse	5730020			
		Hog Harbour	Dispensary	Francaisco Richie	Nurse Practitioner	5607623			
		Sara	Dispensary						
		Kole	Dispensary	Pamela lavro	Nurse Aide				
		Wunavai	Dispensary	Sarlo	Nurse Aide				
		Vaturei	Dispensary	Marie Anaclet	Registered Nurse	5655921/7770184			

A2.4: SHEFA Province

Table A2.7: Risk Profile and Rating

Disaster type	Risk rating	(Likelihood/Impact)
Cyclones (Typhoons)	12-20	(4 / 3-5)
Earthquake	9-16	(3-4 / 3-4)
Volcanic eruption	9-12	(3-4 / 3)
Tsunami	9-16	(3-4 / 3-4)
Flooding	16	(4 / 4)
Drought	16	(4 / 4)
Diseases outbreaks and epidemics	15	(3 / 5)
Climate Change (effects of)	16	(4 / 4)
Urban disasters	20	(4 / 5)

Figure A2.7: Disaster Risk Management Organogram: SHEFA

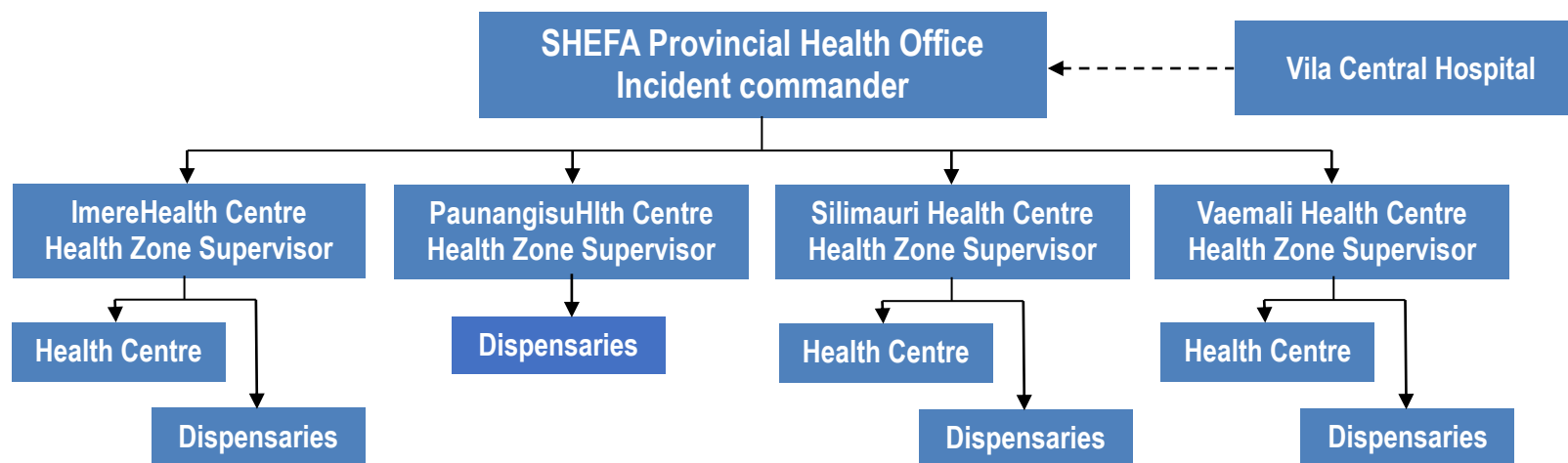


Figure A2.8: SHEFA Province Map Detailing Health Facilities, Islands Estimated Population 2017 by Area Council.

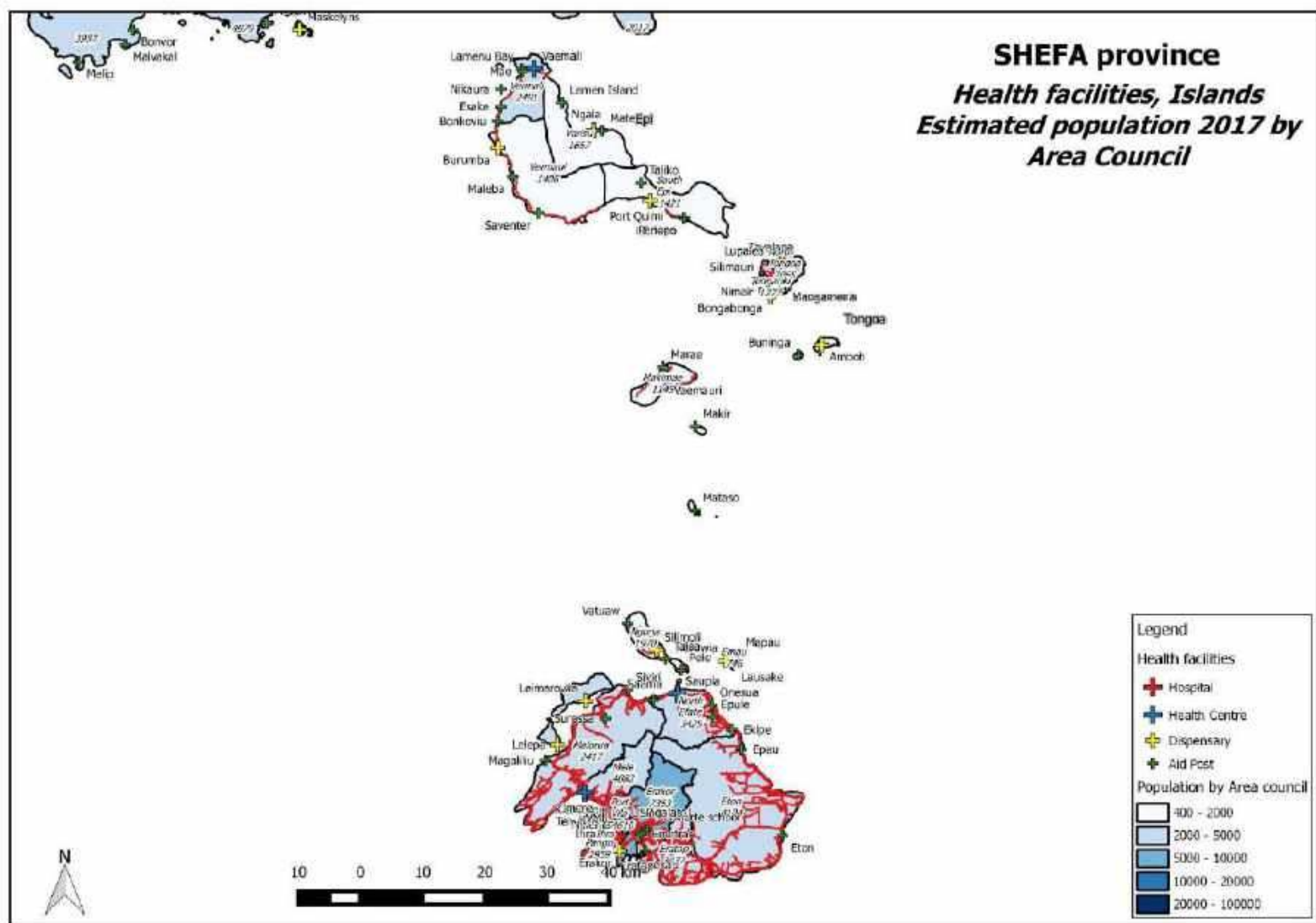


Table A2.9. Emergency contact details for Provincial Health Managers, health facility managers/staff and Area Secretaries.

Island	Health Zone	Facility Name	Facility Type	Provincial Health Officer in Charge			Area Secretary		
				Name	Position	Contact	Area Council	Name	Contact
Efate	SHE01	SHEFA Rural Health	Office	Janet Erick	Provincial Health Manager		Port Vila		
		Vila Central Hospital	Nat'l Referral Hosp	Dr Tonny Harry	Medical Superintendent	7772001			
		Rufare Mauri (Ifira)	Dispensary	ChresillaTavue	Registered Nurse	7102047	Pango	Andrew Kalpukai	7720651
		Erakor (Village)	Dispensary	BetinaKalotang	Registered Nurse	7351547	Erakor	KalinaKalmari	5952064
		Imere (Mele)	Health Centre	KalwatPoilapa	Nurse Practitioner	7757483/5447229	Mele Maat	Joseph Frank	5646027
	SHE02	Saupia/Paunangisu	Health Centre	BladineTaripu	Nurse Practitioner	7730782/5338555	North Efate	Johnny Kaltapiri	5448744
Lelepa		Amauri	Dispensary	RiskoPakoa	Registered Nurse	7317543/7317543/5988118	East Efate	Kalpeau Joseph	5911278
Moso		Leimarowia/Supiariki	Dispensary	Jenny Vieremaito	Registered Nurse	5374039			
Nguna		Silimoli	Dispensary	Lui Daniel	Nurse In-Charge	7774766 5451508	Nguna/Pele	Ishmael Thomas	5991890
Emau		Marowia	Dispensary	Marie Jacob	Nurse aide	7387805/5721192/5651754	Emau	Jeffery Daniel	5699237
Tongoa	SHE03	Silimaui	Health Centre	Leisavi Morris	Midwife	5914222/5477804	Tongoa	John Tapang	5395039
		Nimair/Bongabonga	Dispensary	Lilly Joe	Nurse Aide	7730852 5638273			
		Tavalapa	Dispensary	Lucy Seresere	Nurse aide	5381343/5347010			
Tongariki		Amboh	Dispensary	Lilly Joe	Nurse Aide	7711553/7109056/5638273			
Emae		Vaemaui	Dispensary	Donald Kalsong	Nurse In-Charge	5928120 7712390	Emae	Richard Jennery	5910751
Epi	SHE04	Vaemali	Health Centre	RosalinsaOmawa	Midwife	5306294 5373567	Vermali Epi	Morris Jack	7793571
		Burumba	Dispensary	Solomon Kora	Registered Nurse	7390754	Vermali Epi	GideonYonah	7722923

Island	Health	Facility Name	Facility	Provincial Health Officer in Charge			Area Secretary		
		Ngala	Dispensary	Nelly Aram	Nurse In-Charge	7733353 5497614	Yarsu Epi	Timothy Andre	5963542
		Port Quimi	Dispensary	Marie Jean Vira	Nurse In-Charge	7102445	Varsu Epi a	Phillip Dick	5924640

A2.5: TAFEA Province

Table A2.10: Risk Profile and Rating

Disaster type	Risk rating	(Likelihood/Impact)
Cyclones (Typhoons)	20	(4 / 5)
Volcanic eruption	9-12	(3 / 3-4)
Earthquake	9-16	(3-4 / 3-4)
Tsunami	12-16	(3-4 / 4)
Flooding	9	(3 / 3)
Drought	20	(4 / 5)
Diseases outbreaks and epidemics	16	(4 / 4)
Climate Change (effects of)	16	(4 / 4)

Figure A2.10: Disaster Risk Management Organogram: TAFEA

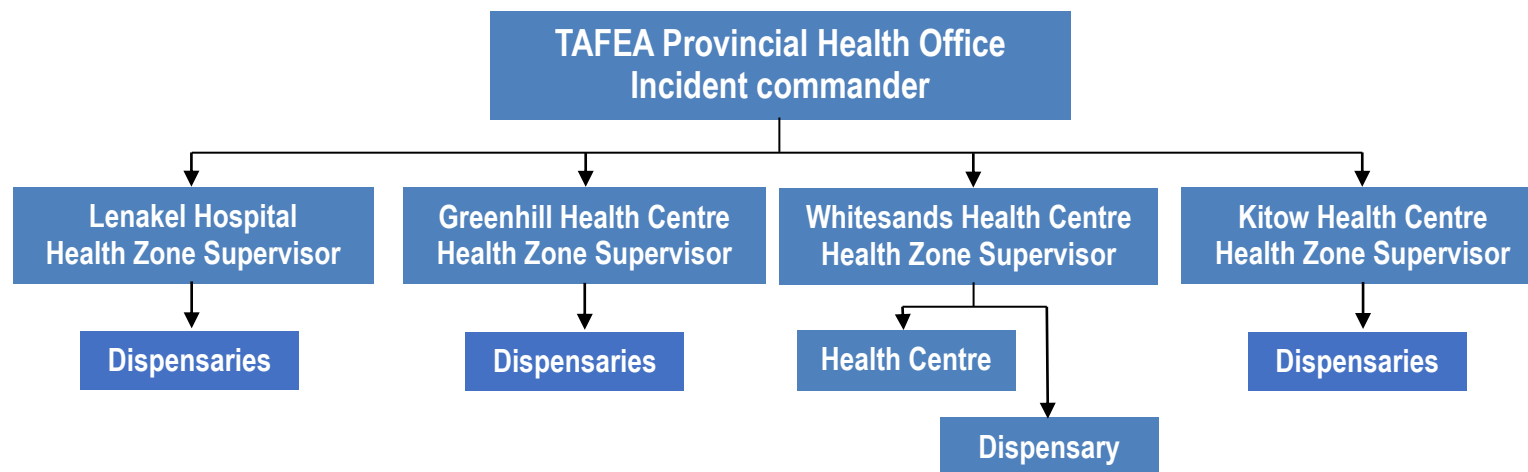


Figure A2.11: TAFEA Province Map Detailing Health Facilities, Islands Estimated population 2017 by Area Council.

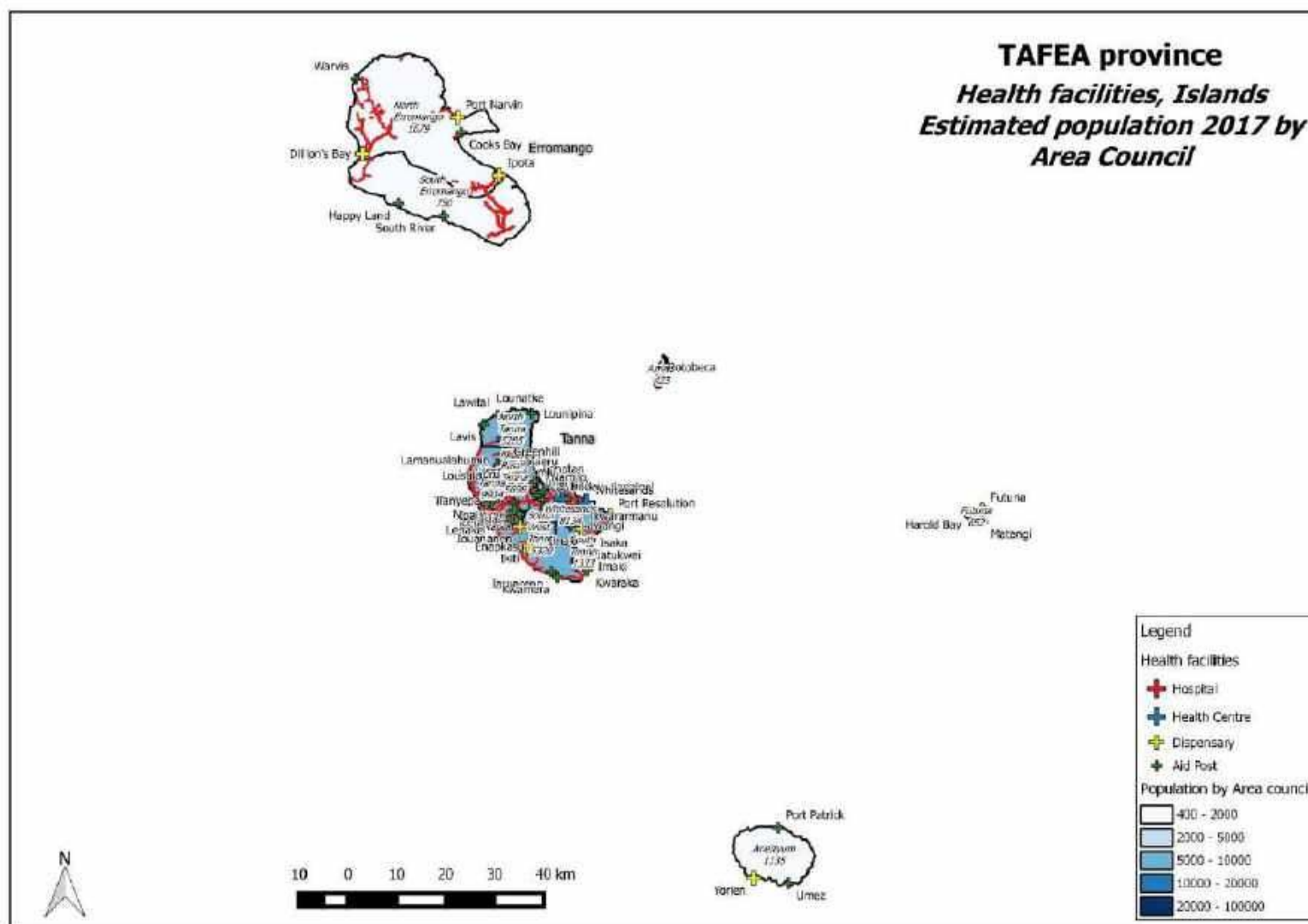


Table A2.12: Emergency contact details for Provincial Health Managers, health facility managers/staff and Area Secretaries.

Island	Health Zone	Facility Name	Facility Type	Provincial Health Officer in Charge			Area Secretary		
				Name	Position	Contact	Area Council	Name	Contact
Tanna	TAF01	TAFEA Provincial Health	Office	Simon Saika	Provincial Health Manager (Community)	7108280	West Tanna	Wendy Tomasi	5668243
		Lenakel Hospital	Provincial Hospital	Dr Robert Vocor	Medical Suprintendant				
				Jerry Iaruel	Provincial Health Administrator				
		launanen	Dispensary	Scott Jerry Dan	Registered Nurse	7379237			
		Tanyeba	Dispensary	Mark kawia	Nurse Aide	7347693			
		Ikiti	Dispensary	Simon Nompuat	Nurse Practitioner	7719432			
	TAF02	Greenhill	Health Centre	George Nalau	Nurse Aide		North Tanna	Henry Saute	5407664
		Louwieru (Jet)	Dispensary	Jimmy Joe	Registered Nurse	5404236	Middle Bush Tanna	John Noklau	7756403
		Lamlu St Raphael	Dispensary	Sr Lina	Registered Nurse	7719432			
	TAF03	Kitow (NagusKasaru)	Health Centre	Vacant			South West Tanna	Lui Alick	5354708
	TAF04	Iatalakei (Whitesand)	Health Centre	Jocelyn Peter	Health Zone Sup'r	5482371	South East Tanna	RasaiJaffet	7793689
		Ikwarmanu (Nafe)	Dispensary	KibsenAthen	Nurse Aide	7796170			
		Port Resolution	Dispensary	Nancy Miyake	Retired Nurse	5483290			
Erromango		Imaki	Health Centre	Tom Bertrand	Mid Wife	7780278	South Tanna	Noel Noar	7756009
	TAF02b	Ipota	Dispensary	Narai Harry	Registered Nurse	7108391	South Erromango	TomasiSimbert	7790072
		Dillon's Bay	Dispensary	RogorNelo	Registered Nurse	7318968	North Erromango	Remy Nampil	7750966
		Port Narvin	Dispensary	Meriam Wambu	Registered Nurse	7106327			
Aniwa	TAF03b	Rotobeca	Dispensary	EpenNiavi	Registered Nurse	7379020	Aniwa	LenonLukenNouka	5903399
Futuna	TAF04b	Naukero	Dispensary	Jeffry Naparau	Registered Nurse	7735841	Futuna	Tokalatipu	7785492
Aneityum	TAF04c	Yorien	Dispensary	Jean Yves Dick	Registered Nurse		Aneityum	Ruben Nerian	7718542

A2.6: TORBA Province

Table A2.13: Risk Profile and Rating

Disaster type	Risk rating	(Likelihood/Impact)
Cyclones (Typhoons)	12-20	(4 / 3-5)
Volcanic eruption	9-16	(3-4 / 3-4)
Earthquake	9-16	(3-4 / 3-4)
Tsunami	12-16	(3-4 / 4)
Flooding	12	(4 / 3)
Drought	16	(4 / 4)
Diseases outbreaks and epidemics	9-12	(3 / 3-4)
Climate Change (effects of)	16	(4 / 4)

Figure A2.14: Disaster Risk Management Organogram: TORBA

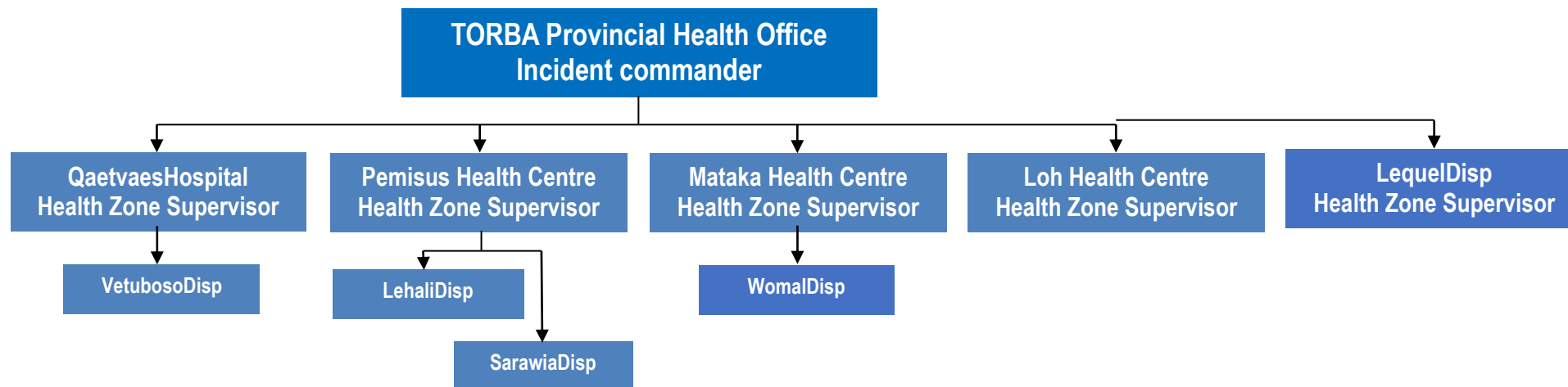


Figure A2.15: TORBA Province Map Detailing Health Facilities, Islands Estimated population 2017 by Area Council.

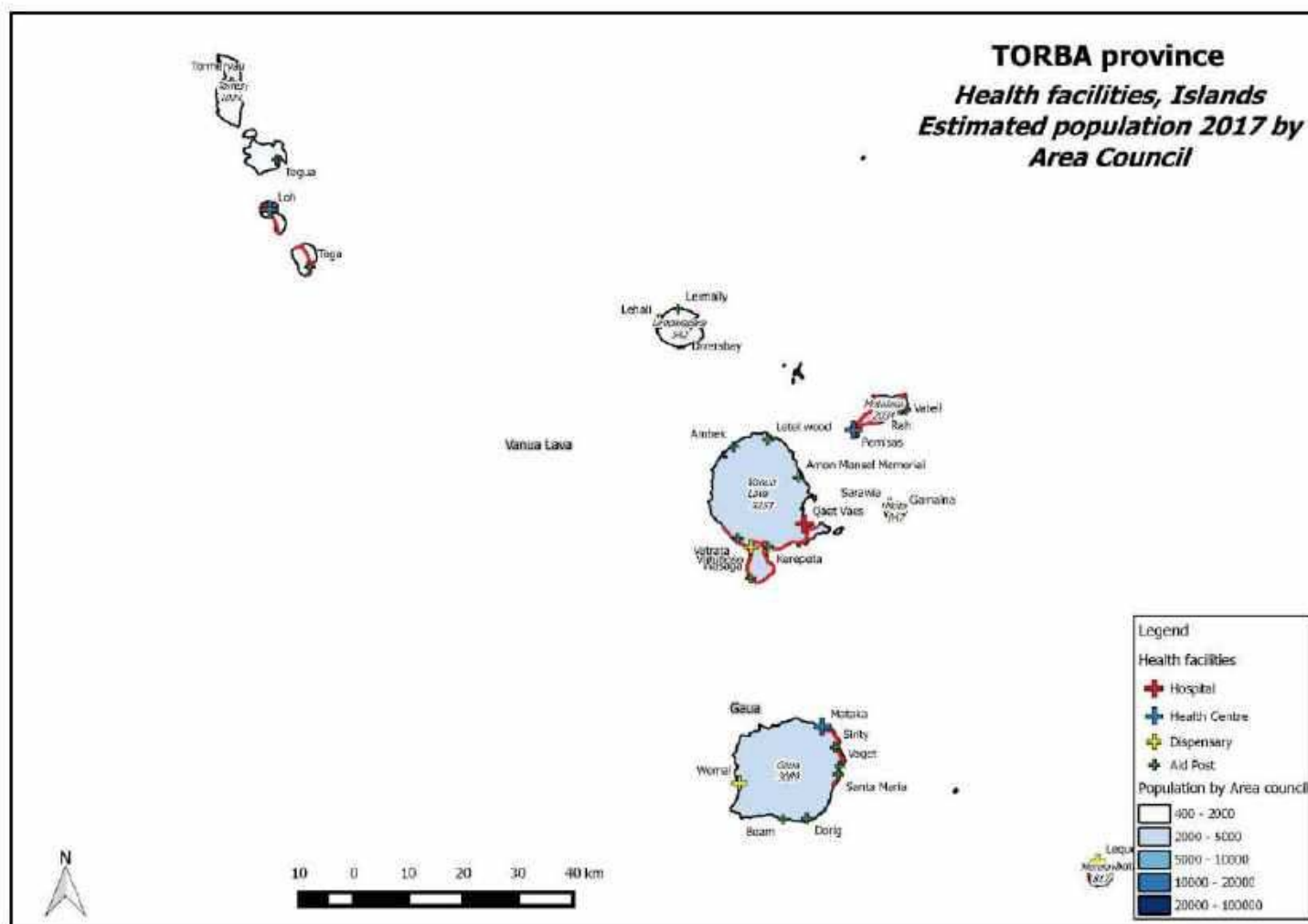


Table A2.16: Emergency contact details for Provincial Health Managers, health facility managers/staff and Area Secretaries.

Island	Health Zone	Facility Name	Facility Type	Provincial Health Officer in Charge			Area Secretary		
				Name	Position	Contact	Area Council	Name	Contact
Torres Group	TOR01	Loh	Health Centre	Zebulon Moipitven	Nurse Practitioner	7114605	Torres	Thomas Simon Putunleta.	
		Litau (Toga)	Aid Post	Aiden Selwyn	VHW				
Motalava	TOR02a	Pemisas	Health Centre	AbegaiManlumgeo	Mid Wife	5412113	Motalava	Yogi Woleg	5474082
Mota		Sarawia	Dispensary	Erick TensleyTias	Registered Nurse	5671350 HF Teleradio	Mota	Dinh Ralph Wotlemaru	
Ureparapara	TOR2b	Lehali	Dispensary	Ray Williams Brooker	Registered Nurse	HF Teleradio	Ureparapara		HF radio
Vanualava	TOR03	TORBA Provincial Health	Office	StepheneNako	Provincial Health Administrator	5663757	Vanualava	Stephen Bet	5395719
		Qaet Vaes	Hospital	Hendry Wetul	Nursing Services Manager.	5341359 7745316			
		Vetuboso (Hanington)	Dispensary	LyenManliwos	Midwife	5397736			
Gaua	TOR04	Mataka	Health Centre	JoycelyneNako	Midwife	5953655	Gaua	Barry Wobur	5395260
		Womal (Dolap)	Dispensary	Vacant	General Nurse		Merelava	Norman Philip	5977412 5955257
Mere Lava	TOR05	Lequel	Dispensary	Vacant	General Nurse				

