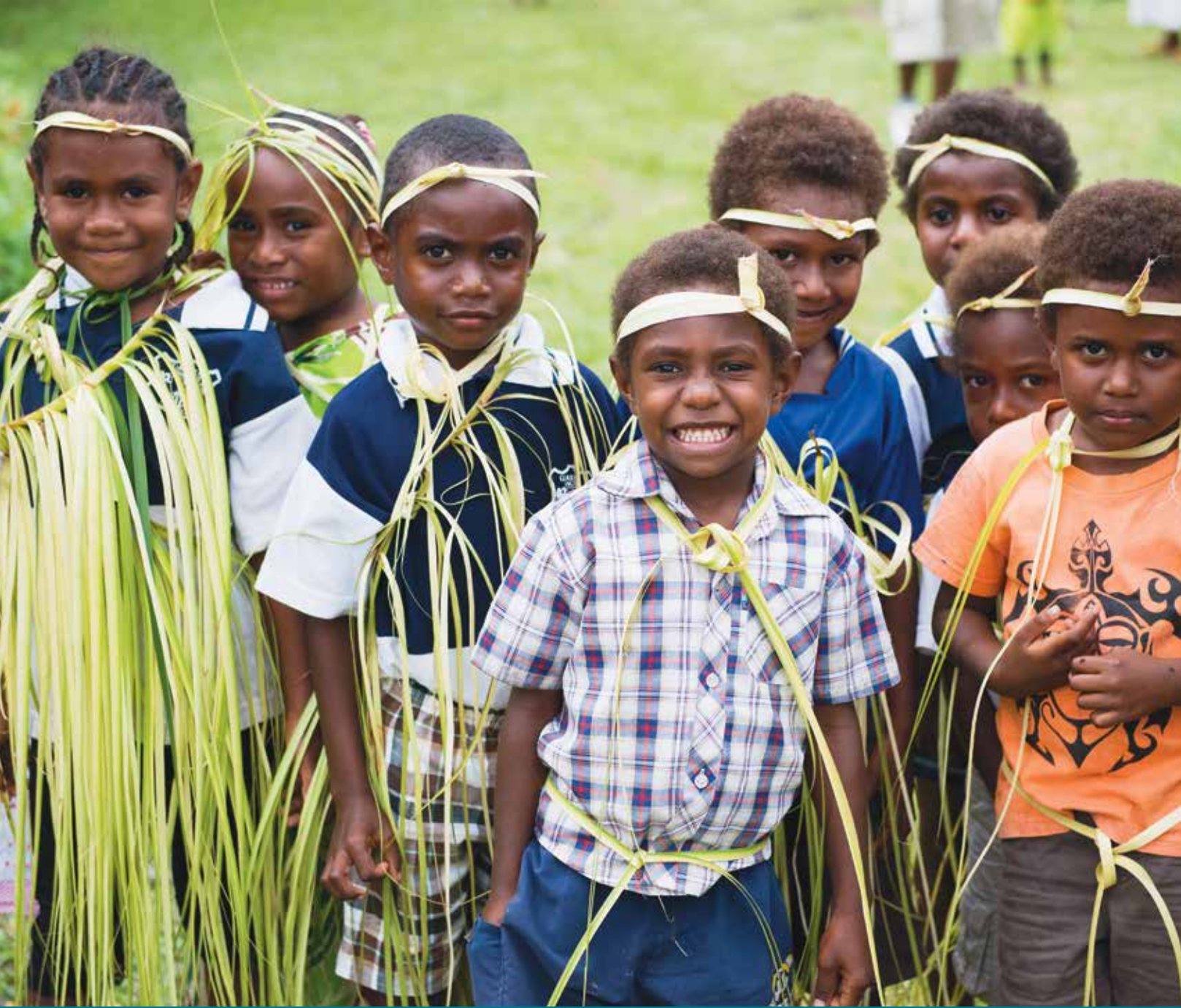

Key Messages for Disaster Risk Reduction and Resilience in Vanuatu:

A Guide For Public Education & Awareness

GOVERNMENT OF VANUATU
NATIONAL DISASTER MANAGEMENT OFFICE
MINISTRY OF EDUCTION AND TRAINING
VANUATU METEOROLOGY AND GEO-HAZARDS DEPARTMENT

Contents

Financial Support provided by:

Humanitarian Aid and Civil Protection

The Ministry of Education and Training and National Disaster Management Office, in partnership with Save the Children held the “Consensus-based Key Messages for Awareness and Education for Disaster Risk Reduction” in 2016. The workshop developed a set of Key Action Messages for household and family disaster risk reduction, to form the foundation for public awareness messaging, information education and communication materials, and curriculum development for disaster risk reduction. Global Template provided by International Federation of Red Cross and Red Crescent ‘Public awareness and public education for disaster risk reduction: key messages’.

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Save the Children

International Federation of Red Cross and Red Crescent Societies

> Cover photo: Three months after Cyclone Pam, the Tatura Kindy on the Island of Tongoa is open again. Photo: Robert McKechnie, Save the Children

Key Messages: Using this Guide

The International Federation of Red Cross and Red Crescent published the 'Public awareness and public education for disaster risk reduction: key messages' – a guide, designed to help harmonize messages for disaster risk reduction. Harmonized messaging is a key goal in disaster reduction awareness, and is particularly important when it comes to scaling-up efforts to create a culture of safety. To promote consistent actions to the public, we need key safety and resilience messages. Key messages comprise the core, common and comprehensive information about safety and resilience that are needed to promote consistent and sustained DRR – they are 'actionable' risk reduction messages. If we act on these messages, we could substantially avoid the effects and impacts of disaster. Research indicates that effective public education for DRR requires sustained repetition of the same messages. If messages are contradictory, inconsistent or unclear, the result is confusion, apathy, mistrust and inaction.

Save the Children worked together with the Vanuatu Red Cross and a group of key stakeholders to adapt and harmonize national and local versions of these messages.

This guide has been contextualised to Vanuatu, and the content within can be used directly, or as a guide to create more simple messages.

This guide was developed to be used by:

- Agencies and ministries who provide education and awareness to the public
- Whilst not yet tailored to the needs of specific audiences, it may also be used by:
- Community leaders, trainers and members
- School disaster management committees and teachers
- Households and Individuals

The guide can be used to:

- Develop educational resources, i.e. teachers can use key messages to guide students in creating Posters, songs, essays and more
- Develop media awareness campaigns
- Undertake actions in your household and community to promote a culture of safety

The core set of common messages, in Section A, addresses all-hazards household and family disaster planning. This section contains the guidance that everyone needs to know, to address all manner of hazards, including guidance for household fires, as well as general messages for early warning and evacuation in response to various hazards. Section B presents additional hazard-specific messages that supplement the generic information in Section A, without duplicating the same instructions.

Important phone numbers

- National Disaster Management Office Emergency Information: +678 22699
- Meteorological and Geohazards Department
  - Geohazards section: +678 24686
  - Tsunami and Cyclone Warnings: +678 22932

Disclaimer

The messages contained in this document have been approved and endorsed for use in Vanuatu by the National Advisory Board on Climate Change and Disaster Risk Reduction. Caution should still be exercised in the dissemination or use of these messages, to ensure that lives and property are not endangered or compromised in any way.

"This document has been produced with the financial assistance of the European Commission. The views expressed herein should not be taken, in any way, to reflect the official opinion of the European Commission."

Section A: All-hazards household and family disaster prevention in a nutshell

> The rebuilt Euta Village Women's market
Photo: Robert McKechnie, Save the Children

Section A: All-hazards household and family disaster prevention in a nutshell

Find out what could happen. Stay informed.

Make a household disaster and emergency plan, considering everyone in your household.

Reduce structural, non-structural and environmental risks in and around your home.

Learn response skills and practise your plan.

Prepare response provisions to survive for about a week. Prepare evacuation bags.

Work together with your workplace, schools, neighbours and local community to assess your risks, plan to reduce them, and prepare to respond.

ALL-HAZARDS HOUSEHOLD PLAN:

1. ASSESS & PLAN

Key message	Context-specific details
A1. Assess your risks where you live, work, study and play	• Learn about potential hazards, local emergency plans and communications and warning systems in your community. • Identify hazards and vulnerabilities in your home and surroundings • Learn about the contact information, roles and responsibilities of government agencies in assessing and reducing risks, issuing early warnings and planning for response. • Learn who is likely to be most exposed to different hazards, where, and why
A2. Make a plan	• Include all household and extended family members in your planning process. • Meet with household and family members to discuss risks in your house and surrounding environment • Disaster plans should be developed by and disseminated to both men and women, to ensure responsibility and awareness. • Work out what actions are needed to lower risks and identify what resources and help you will need. • Plan the steps you will take to protect yourselves, to communicate, reunite and recover. • Decide who will do what, when, and how it will get it done
A3. Consider people's needs and create and prepare a support network	• Identify each person's individual needs and capacities. • Consider people who are older, pregnant women, people with disability, sick people and young children. • Access the needs of each member of your household during a disaster. Example: how will someone who cannot walk get to an evacuation centre. If anyone will need help, for any reason, plan now for a network of neighbours, friends, and coworkers to provide assistance during an emergency. • Use your imagination and your network to problem solve.

ALL-HAZARDS HOUSEHOLD PLAN:

1. ASSESS & PLAN

Key message	Context-specific details
A4. Make plans to reunite	• Agree on safe meeting places inside the house, outside the house and outside the neighbourhood. Know how you will contact/pick up your children after a disaster • Prepare emergency contacts for school and childcare pick-ups
A5. Keep emergency contact and health information available	• Make emergency contact and health information cards for each household member, to be carried at all times (especially for children when they are away from home or school, and for anyone with particular access or functional needs). • OR if this is not practical put a list of emergency contact details in a place in your house where everyone can see/find it.
A6. Learn and participate in your community's early warning systems	• Call NDMO at #166 for free, for any current advisories or alerts (Regular #22699). • Learn your community's early warning systems. If your community does not have one, help to develop one, taking care that the messages will be received and understood by everyone – especially the most vulnerable. • Take warnings seriously, even if they are frequent. Be alert for changes in circumstances, as risks may have increased since the early warning information was originally issued. • Follow evacuation instructions without hesitation. • Do not return home until you get an all clear message
A7. Make an evacuation plan: know your shelter destination and how to get there	• Know where to go if you need to leave your house/evacuate. Everyone in your household should know where to go, and where to meet if they have to leave. • Plan different ways for how you will get to your shelter • Ask your community disaster committee member about community plans for directed evacuation and transportation options.
A8. Learn the location of shelter, safe place or temporary housing	• Arrange for temporary housing with relatives or friends far from the risky area. • Learn the locations of shelters or safe place for your community, and check to see that any special needs can be met.

ALL-HAZARDS HOUSEHOLD PLAN:

2. REDUCE DANGERS:

Key message	Context-specific details
A9. Build cyclone and earthquake proof houses	• Consider safe places to build your house • Design, build and maintain your home in accordance with building regulations and protect from wind, water and bad weather.
A10. Follow regulations for building schools/ classrooms	• Know the type of construction and materials used for your building. • Learn about regulations • Have concrete buildings evaluated by a professional structural engineer.
A11. Practise home fire prevention	• Do not smoke in bed or when lying down. • Keep matches, lighters and flammable products away from children and from heat sources. • Never leave a fire or candle burning when you are asleep or not around • Check wiring in your home, repairing broken electrical cords, breaking or exposed wires or loose plugs. Do not run electrical cords under carpets or floor mats. • Don't put too many extension cords in one plug • Check and maintain connections on electrical things. • Keep flammable products far from stove or fire. • Do not operate or refuel generators indoors.
A12. Store hazardous materials safely	• Limit, keep out and separate dangerous materials. • Store poisons and flammable products safety.
A13. Practise good hygiene and sanitation	• Wash hands well, using soap and water sand or ashes or fire. • Use toilets or bury human waste. • Do not go to the toilet in open space • Protect water and food supplies from pollution

ALL-HAZARDS HOUSEHOLD PLAN:

3. LEARN RESPONSE SKILLS

Key message	Context-specific details
A14. Learn how to react to fire	• If possible, remove anyone in immediate danger. • Make sure that doors and windows are closed, to confine fire and smoke. • Alert others to the fire and activate any fire alarm systems. • Call the emergency fire service for help. • Try to extinguish small fires using appropriate tools. • Fire suppression equipment: Fire extinguisher or bucket of sand
A15. Know what to do if you see fire or smell smoke	• If you smell smoke or see a fire, alert others, get out quickly, assist others, and call for help. • If there is smoke in the room, follow the advice 'Get down low and go, go, go'. Inhaling smoke or toxic gases kills many more people than burns do. Feel the doorknob and space around the door with back of your hand, but do not open it if it feels hot. As you exit each space, close doors and windows and turn off appliances • Use a damp cloth over your nose and mouth to reduce fume inhalation when you are evacuating or waiting for rescue. • If you are on fire 'Stop, drop and roll' to extinguish the flames. If someone else is on fire, make them do the same. • If you cannot get out, close the doors and stay down low, opening a window a little to signal for help. Protect your hands and face with wet cloths. Place a wet towel at bottom of door to prevent smoke from entering the room.
A16. Respond to early warnings	• Stay alert for emergency warnings, and respond immediately. • Know the alarm system that will be used and practise your response. Know your emergency exit choices. • If you are advised to evacuate, leave immediately. • Take your pets or service animals with you if possible. • Don't forget your evacuation bag, with copies of personal documents. • Secure your belongings if you have time.

ALL-HAZARDS HOUSEHOLD PLAN:

3. LEARN RESPONSE SKILLS

Key message	Context-specific details
A17. Learn first aid	• Learn first aid skills. Make sure that at least one member of your household is trained in first aid. • Practise and update your first aid knowledge every year.
A18. Practise regular emergency drills	• Conduct or participate in emergency evacuation drills (including at home) at least twice a year. • Conduct or participate in other hazard drills, including full response simulation, at least once a year. • Be sure to include all members of household in practice drills.
A19. Stay informed	• Listen to a portable battery-operated radio or television for emergency information and safety instructions. • Know the frequency of your local emergency-alarm radio station (Radio Vanuatu – FM 100 or AM 1125).
A20. Familiarize yourself with household water-treatment methods to purify water	• If the water source is not clean or water is not stored properly, carry out water treatment procedures at the household level. • First strain water through fine clean cotton is an important first step. Follow by disinfection, sedimentation or filtration.
A21. After hazard impact, help those around you	• First, check your own safety, then those immediately around you, before moving or going to help others. • Check yourself and others for injuries. Do not try to move anyone who is seriously injured unless they are in immediate danger of death or further injury. • If you must move someone who is unconscious, first stabilize their neck and back, and then get help. • If the person is not breathing, carefully position them so they are lying flat on the floor with their chin tilted slightly up, clear the airway, close their nose, and administer rescue breaths via protected mouth. • Maintain normal body temperature (not too cold or too hot) and raise legs by about 20–30cm, above the heart. • Stop bleeding only by using pressure and elevation. Do not use tourniquet

ALL-HAZARDS HOUSEHOLD PLAN:

3. LEARN RESPONSE SKILLS

Key message	Context-specific details
A22. After hazard impact, check for damage	Follow the specific advice below for the situation in question: • Electricity: If your body or the equipment is in contact with water, do not touch electrical circuits or equipment. Do not touch damaged electrical wires or items in contact with them. If possible, turn off electricity at the main fuse box and check for damage. If the power is out, turn off and unplug major appliances to protect them from a power surge when electricity is restored. If the situation is unsafe, leave and call for help. • Sewage: If you suspect damage to the sewage system, avoid using toilets and tap water. Have septic tanks serviced regularly. • Water: If you suspect damage, turn off the main water valve. Avoid using water, except from undamaged water heaters or ice cubes made before the hazard impact. • Spills: Clean up spills carefully. Place containers in a well-ventilated area. Keep combustible liquids away from heat sources. Pay special attention to flammable liquids such as gasoline, paint thinner or lighter fluid.
A23. After hazard impact, take care of yourself	• Keep with you any critical health information with you – especially if you have diabetes, heart disease or need any regular life-sustaining or behaviour-controlling medications or devices. • Prevent exhaustion. Pace yourself, rest and sleep. • Drink plenty of clean water. Eat as well as circumstances allow. • Wear protective shoes, clothing and gloves. • If you are working in dirty places, wash your hands thoroughly with soap and water.

ALL-HAZARDS HOUSEHOLD PLAN:

3. LEARN RESPONSE SKILLS

Key message	Context-specific details
A24. After hazard impact, support response, clean-up and recovery	• After disasters, sadness, grief, anger and various feelings are considered normal. Try to be flexible and to understand that everyone has different needs and ways of coping. • Reduce stress by spending time with loved ones, talking and taking care of yourself. • Be aware of children's behaviour changes and needs. • Return children to normal recreational and educational activities as soon as possible. • Work together to return to normal routines, roles and responsibilities. • Organize or participate in memorials, if this feels helpful. • Continue to practice preparedness together.
A25. Ensure Educational Continuity for school-aged children	• Every girl and every boy has a right to education; it is no different after a disaster. • Following a disaster, schools should be accessible and provide a safe and secure environment, for both boys and girls. • School can provide the stability, structure and routine that girls and boys need after a disaster.
A26. Ensure the safety of women and girls in response activities and do no harm.	• Consult with women about their protection concerns and address them in the response. • Ensure women have a dedicated complaints mechanism. • Ensure services are provided at times and locations which are suitable for women

ALL-HAZARDS HOUSEHOLD PLAN:

4. KEEP RESPONSE SUPPLIES:

Key message	Context-specific details
A27. Store water and food	• Store enough clean water and non-perishable food to survive for about a week. • Remember infant and other special dietary needs and pets • Keep 25 litres water for each household member, half for drinking or cooking and half for sanitation. • Replace every six months. • Keep the water in clean, closed containers.
A28. Store response supplies at home, work and school	Keep these in a safe place – outside your home, where possible: • emergency contact information and copies of important documents (marriage/birth certificate, school certificate, land document, passport) • first aid kit and prescription medications • dust mask (for ash-fall) • torch/flashlight – either solar or wind-up, or with extra batteries. • plastic bags and ties for personal sanitation • liquid bleach for water purification • multi-purpose pocket knife tool • matches • a whistle, shell, or bell to signal for help.
A29. Prepare a 'go bag' for evacuation	• Pack evacuation bags containing: • Emergency water and high-energy food • communication equipment such as a portable radio (solar wind up, or with extra batteries) • first aid supplies and prescription medications • tools including a torch/flashlight (solar, wind up or with extra batteries) knife or multi-purpose tool, matches • clothing, including rain gear, a change of underclothing, sturdy shoes and work gloves • emergency blanket • personal toiletries and items such as assistive devices • emergency contact information and copies of vital record • Take this bag when you evacuate

ALL-HAZARDS HOUSEHOLD PLAN:

4. KEEP RESPONSE SUPPLIES:

Key message	Context-specific details
A30. After power outage throw away contaminated food and water	
A31. Purify water	• Even if water looks clean, it may be contaminated. If it is of questionable purity, carry out the following steps: • Filter water through a cloth or letting it settle and pour it into a clean container. • Boil the water for at least one minute or until large bubbles appear, then let it cool. • Add 1 drop bleach per litre of water, mix well, and let stand for 30 minutes OR place in a clean, transparent plastic or glass bottle and lay it in direct sunlight for six hours. • In all cases, store water in a clean, closed container
A32. Ensure WASH facilities are safe for women and girls to access.	• Adequate and appropriate WASH facilities can play an important role in the protection, safety and dignity of women and girls. • Women have different water, sanitation and hygiene needs than men, which need to be adequately addressed • Ensure WASH facilities are safe for women and girls to access. • Ensure WASH facilities provide safety, privacy and dignity to women and girls. • Consult women on their WASH needs, and prioritise assistance to vulnerable groups

Section B: Hazard-specific messages

> A woman holds produce to sell at the market.
Photo: Robert McKechnie, Save the Children

Drought

A drought is a slow-onset phenomenon with a long period of very low rainfall. This means there is less groundwater, surface water and/or lower reservoir levels. The shortages of water for drinking, sanitation and irrigation impacts agriculture, livestock and livelihoods, and can lead to food insecurity, spread of disease, malnutrition and starvation, migration and dislocation, and economic losses. Drought can also affect power generation, transportation and commercial or industrial needs.

Periods of abnormal dryness are a normal, recurrent feature of climate, and are often predictable. However, they are also impacted by the human land-use degradation, dam construction, climate variability and climate change.

Vulnerability is made worse by the following factors:

- population pressures
- food insecurity
- economic systems that are strictly dependent on rain-fed agriculture
- poor infrastructure including irrigation, water supply and sanitation systems
- health conditions
- seasonality
- absence of warning systems
- other concurrent economic and political conditions.

1. DROUGHT: Assess and plan

Key message	Context-specific details
D1. Be informed	• Learn about monthly, seasonal and long-term weather outlooks and what they may mean in your area. • Understand the optimal weather conditions and traditional indicators for different agricultural practices and water requirements, and compare with current practices.
D2. Work with your neighbours and community to present drought impacts	• Participate in community risk mapping, capacity mapping and drought monitoring • Work with local authorities to develop a drought mitigation plan

1. DROUGHT: Assess and plan

Key message	Context-specific details
D3. Approach water as a community resource, and plan accordingly	• Work with local authorities to develop a water conservation plan and wherever possible to plan for and reduce the impacts of water shortages. • When planning your land use identify water resources and learn how to conserve and extend them.
D4. Assess epidemic risks and plan for prevention	Stay in contact with your health care providers and learn about: • how to keep water clean or purify it • good sanitation and hygiene practices • available immunization programmes • the airborne, water-borne or vector-borne risks you may face • what kinds of information to communicate
D5. Plan to improve your household food security	• Plant backyard gardens. • Set up seed stock. • Store food for use during emergency. • Look for ways to make money for food during disaster like El Nino and El Nina. • Keep an eye on the food stock for your animals • Save some money for times of disaster

2. DROUGHT: Reduce dangers

Key message	Context-specific details
D6. Participate in community water resource management	• Protect water catchment areas from poisons products (like sprays for insects)
D7. Stop cutting down trees and start replanting trees	• Protect water catchment areas from bush clearing • Plant trees near water catchment areas.
D8. Save water in soil through replanting of trees and safe gardening	• Plant trees – especially that need little water – and dried plants around them. • Use dried plants covers to capture or keep water • Identify and grow vegetables that don't need much water. Such as: • Save rainwater by planting vetiver or lemongrass. • Implement crop diversification and inter-cropping to improve yields by having plants complement and support each other. • Avoid slash and burn agriculture

3. DROUGHT: Keep response supplies:

Key message	Context-specific details
D9. Protect livestock from dying	• Build a fence around your land • Decide the number of animals that you can keep • Kill or sell your animals before they get sick or lose their value for money

D10. Learn principles of good nutrition and hydration	• On average an adult should drink about 2 litres of water per day, although this amount may increase or decrease under different conditions.
	• Plan for a basic food ration equivalent. This should be as simple as possible, to include:
	  ▸ a basic staple such as rice, corn, wheat flour or corn–soy blend
	  ▸ a concentrated source of energy (oil or another fat)
	  ▸ a concentrated source of protein, such as legumes (beans, peas, lentils).
	• Learn about the most vulnerable people in your community, including who and where they are and how you can help them

Earthquake

An earthquake is a sudden, rapid shaking of the ground caused by the shifting of rocks beneath the Earth's surface. Earthquakes strike suddenly, without warning, and can occur at any time of the year – day or night. The impacts of earthquakes include property damage, loss of shelter and livelihood, and disruption of critical or 'lifeline' infrastructure, which might cause injury and deaths.

Earthquakes are among the deadliest of natural hazards. Most deaths are due to building collapse or to secondary hazards, such as fires, tsunamis, flooding, landslide and release of chemicals or toxic materials. Injuries tend to be due to less-severe building damage, parts of buildings or their contents falling or breaking, and failure to take precautions during aftershocks. Vulnerability factors include:

- non-compliance or non-conformity to building codes established for expected intensity of shaking
- poor land-use planning
- building in unsafe locations
- unprotected critical infrastructure
- inadequate non-structural measures to secure building contents and equipment
- disorganized or unpractised response.

1. EARTHQUAKE: ASSESS & PLAN

Key message	Context-specific details
E1. Identify safest places	• Identify the safest places in your building, and in each room. These places must be located away from exterior walls, windows, glass and large or heavy objects that can fall, slide or collide. • Outside your house or building, the safest place is away from falling structures (like powerlines, trees, rocks)
E2. Identify items that could cause death or injury and work out how to secure them	• Look for items up high that could fall and cause injury or block exits

2. EARTHQUAKE: REDUCE DANGERS:

Key message	Context-specific details
E3. Select a safe site for your building	• Locate buildings on stable, solid, dry ground. Leave sufficient space between buildings • Construct a strong by flexible building using the building codes
E4. Build and maintain your building with earth-quakes in mind	
E5. When making improvements, maintain the structural integrity of your building	• Make improvements that follow local building codes, in consultation with a qualified engineer.

E6. Secure your belonging	• Secure large objects and furniture that could fall, break, slide or collide during an earthquake and cause crushing or piercing injuries.
	• Your choices are to relocate, remove or refit, or to anchor, fasten, or secure. For example:
	  ▸ Fasten bookcases, display cabinets and other tall and heavy furniture to the wall. Position them away from anywhere where they could block exit pathways. Secure anything that could fall on people while they are sleeping.
	  ▸ Secure gas and electrical appliances.
	  ▸ Install latches on cabinets and drawers.
	  ▸ Hang heavy items, such as pictures and mirrors, away from exit doors, beds, couches or anywhere that people sleep or sit. Anchor computers and televisions.
	  ▸ Move beds away from windows

3. EARTHQUAKE: LEARN RESPONSE SKILLS

Key message	Context-specific details
E7. Practice earthquake drills in different locations	• Practice earthquake drills, both physically and as thought exercises, in different locations. Considering the impact of strong shaking and identify the safest actions in each place (at home, work and school).
E8. Take immediate action	• Move away from windows, glass and exterior walls and unstable and heavy objects. • Stay calm by counting or taking slow, deep breaths. Look round to assess the situation before moving.
E9. If you are indoors, drop to your knees, cover your head and neck, and hold on to your cover	• 'Drop, cover and hold on'. Drop down on your knees and make yourself small. Cover your head and neck, and protect your face. Hold on to this cover, or move with it, until the shaking stops. Do not attempt to run. • If you are near a sturdy table, get under it. Hold on to the table leg with one hand and protect your eyes with the other hand. • If you are in bed, stay there and protect your head with a pillow. • If you are near a sofa, get down next to it and use a cushion to protect your head and neck. • If you are sitting in a theatre or stadium seat, brace yourself while protecting your head and neck. • If you are in a wheelchair, lock it. If you cannot get down low, brace yourself and protect your head with your arms. • If you cannot drop to the floor, stay where you are, bracing yourself in place. • stay indoors until the shaking stops and you are sure it is safe to exit. • If you are in a tsunami risk area, Drop, Cover and Count.

3. EARTHQUAKE: LEARN RESPONSE SKILLS

Key message	Context-specific details
E10. After the main shaking stops, if you are indoors, move cautiously and evacuate the building	• Once the shaking stops, exit the building following the standard building evacuation rules: • 'Don't run. Don't talk. Don't push. Assist others to evacuate the building • Take your evacuation 'go-bag' with you when you evacuate. • Make sure school buildings are evacuated and have been visually inspected before people are allowed to go back inside. • Other public or private buildings should have their own emergency plans, and management should inform all occupants whether to evacuate or not. If visual inspection shows signs of moderate or heavy damage, the building should be evacuated, and should not be re-occupied until it has been inspected by qualified engineers.
E11. Check for damage and stay out of damaged buildings	• Use extreme caution. Move cautiously and check for any unstable objects and other hazards around you. Open cabinet and closet doors with care. • Stay out of damaged buildings and away from damaged areas. Arrange for temporary shelter rather than staying in damaged buildings. If your building is damaged, it may need to be surveyed by an expert to determine whether you can go back inside. • Watch out for and avoid fallen power lines or broken gas lines • Extinguish any and all flames.
E12. If you are in a coastal area or near a tributary, move away from water to higher ground	• Learn the types of tsunami that may impact you: local, mid-range and distant • Learn and follow the rules for tsunami evacuation

3. EARTHQUAKE: LEARN RESPONSE SKILLS

Key message	Context-specific details

E13. If you are in a mountainous area, stay alert	• If you are in a mountainous area or near unstable slopes or cliffs, be alert for:
	  ▸ falling rocks and other debris
	  ▸ unusual sounds, such as cracking trees
	  ▸ sudden increase or decrease of water in streams
	  ▸ local dams, dykes, or levees that may be prone to damage or destruction.
	• Tune into your early warning system.
	• Be alert for earthquake-induced landslides and avalanches, which can dam streams or rivers or cause outbursts from glacial lakes. Even weeks after an earthquake, breakage of dams can put downstream areas in danger of flooding

E14. If you are near unstable slopes or cliffs, or have a landslide or flood warning, leave if it is safe to do so	• Listen for landslide or flood warnings. • Consider leaving the area if it is safe to do so. • If a warning includes evacuation, evacuate immediately. • If there is a landslide warning and there is a sudden burst of rain, evacuate immediately to your safe haven. • Watch for flooding and be alert when driving near embankments or along swollen waterways.

Landslide

A landslide or landslip refers to a wide range of ground movement, such as rock falls, deep failure of slopes and shallow debris flows.

Debris flow or mudflow is a fast moving mass of loose mud, sand, soil, rock, water and air that moves downhill under the influence of gravity.

1. LANDSLIDE: Assess and plan

Key message	Context-specific details
L1. Learn about local history of landslides	• Learn about past events of landslide and debris flows as they are likely to experience them in the future.

L2. Learn and be alert to early warning signs in the natural environment	• Be aware of areas more prone to landslides
	  ▸ On existing old landslides.
	  ▸ On or at the base of slopes.
	  ▸ At the base or top of an old fill slope.
	  ▸ At the base or top of a steep cut slope.
	• Burn areas and canyon, hillside, mountain and other steep areas are vulnerable
	• Regularly inspect and observe changes in your natural landscape (your property and surroundings) and watch for signs of slope movement
	  ▸ places where runoff water converges
	  ▸ increased water flow over soil-covered slopes
	  ▸ small landslides or debris flows
	  ▸ progressively tilting trees
	  ▸ new springs, new cracks, holes or bare spots on hillsides
	  ▸ rapid increase in creek water levels, possibly accompanied by increased muddiness).
	  ▸ sudden decrease in creek water levels though rain is still falling or just recently stopped.
	  ▸ bulging ground appears at the base of a slope
	  ▸ water breaks through the ground surface in new locations or saturated ground in areas that have not typically been wet before
	  ▸ cracked rock
	  ▸ blockages and water build-up behind retaining walls.

1. LANDSLIDE: Assess and plan

Key message	Context-specific details

L3. Learn and be alert to early warning signs in the built environment	• Regularly inspect and observe changes to the buildings you live, work and play in.
	  ▸ Doors or windows stick or jam
	  ▸ Fences, retaining walls, electricity poles, or trees tilt or move
	  ▸ New cracks appear in plaster, tile, brick, or foundations
	  ▸ Outside walls, walks, or stairs begin pulling away from the building
	  ▸ Soil moving away from foundations
	  ▸ Other structures tilting

L4 Learn and participate in your early warning systems	• Report local conditions to local authorities.
L5 Stay informed about cause of landslide	• Monitor the amount of rain during intense storms. • Monitor the potential risks of landslide caused by earthquake and volcanoes

2. LANDSLIDE: Reduce dangers

Key message	Context-specific details
L6. Follow proper land-use procedures	• Avoid building on steep slopes, close to mountain edges, near drainage ways, along natural erosion valleys, at mouth of steep ravines
L7. Protect your property	• Plant vegetation on slopes • Built retaining walls • Dig channels to direct flow

3. LANDSLIDE: Learn response skills

Key message	Context-specific details

L8. DURING A LANDSLIDE: Listen and be alert to signs of imminent threat	• Be alert to unusual sights and sounds
	  ▸ faint rumbling sound that increases in volume
	  ▸ ground sloping downward in one direction and may begin shifting in that direction under your feet.
	  ▸ trees cracking or boulders knocking together,
	  ▸ trickle or flow of falling mud and debris that may precede a large landslide.
	  ▸ sudden increase or decrease in water flow or change from clear to muddy water
	• Be aware that strong shaking from earthquakes can induce or intensify the effects of landslides.
	• Be alert while driving. Watch for collapsed pavement, mud, fallen rocks.

L9. DURING A LANDSLIDE: Get out of the landslide path	• If you learn or suspect that a landslide is occurring or about to occur, evacuate immediately to a safe place. If you suspect imminent danger:
	  ▸ Get out.
	  ▸ Take your go-bag
	  ▸ Inform your neighbors.
	• Contact local officials and ensure safety of all your family members

L10. DURING A LANDSLIDE: If you cannot evacuate protect yourself in place	• If you are inside:
	  ▸ If escape is not possible move to a corner of the room, curl into a tight ball and protect your head
	• If you are outside
	  ▸ get out of the path of the landslide
	  ▸ Get to the highest spot you can find
	  ▸ run to the closest shelter, such as a group of trees or a building

3. LANDSLIDE: Learn response skills

Key message	Context-specific details
L11. AFTER A LANDSLIDE: Check for hazards	• Stay away from landslide area (further slides may occur). • Check for injured and trapped persons and animals near the slide, without entering the slide area. Direct rescuers to their locations. • Report broken electricity posts and lines and other potential hazards to local authorities • Check your home's foundation and surrounding land for damage.

4. LANDSLIDE: Keep response supplies

Key message	Context-specific details
L12. Use supplies to clear any damages to your home	• Use supplies such as hammer, nails, plywood, sand, sandbags, shovel to clear mud and debris and to rebuild
L13. Ensure the safety of household and community members	• Make sure everybody is accounted for • Assist and treat minor injuries • Call local authorities in case of major damages and casualties

Tsunami

A tsunami is a series of huge waves that can flood land for a long distance and for hours. Tsunamis are caused by an underwater earthquake or volcanic eruption. The first wave may not be the largest. All tsunami are potentially dangerous, even though they may not damage every coastline they strike. Most tsunami are full of debris. Their waves do not curl and break

Storm surges and coastal flooding are caused by high winds pushing on the ocean's surface. Storm surges are particularly damaging when they occur at the time of high tide.

King tides are naturally occurring and predictable seasonal events caused by the moon's gravitational effect. During winter and summer, high tides are higher than average for three or four days. Predicted heights may be affected by local weather and ocean conditions.

1. TSUNAMI: Assess and plan

Key message	Context-specific details
T1. Tsunami is a series of waves and the first one might not be the biggest	• Find out if your locations are at risk from tsunami and coastal inundation. • Learn about the history of tsunami, coastal inundation
T2. Learn about local risks of tsunami, storm surge, (and king tides).	• Find out if your home, workplace, school or visited locations are at risk from tsunami and coastal flooding. • Learn about the history of tsunami, coastal flooding and king tides, and the impacts of climate change on these risks in your area.
T3. Make your tsunami evacuation plans	• Identify higher ground (if possible 30m above sea level or 3km inland) and the routes to get there. • Know the tsunami evacuation zone and evacuation routes for your area. Display maps wherever helpful. • Post and observe evacuation route signs • Plan to evacuate on foot, bicycle, and vehicle where possible.

1. TSUNAMI: Assess and plan

Key message	Context-specific details

T4. If you feel a long or a strong earthquake evacuate immediately	• Learn and be ready to act on natural warning signs for tsunami risks
	• Natural warning signs are:
	  ▸ A very strong earthquake: shaking that lasts for 30 seconds or more signifies high local tsunami risk in very short term (no other warning)
	  ▸ Moderate or weak earthquake shaking that for 40 seconds or more means high local tsunami risk from mid-field earthquake (official warning time may be very short).
	  ▸ Rapid rise or fall in coastal waters
	  ▸ Coastal water making unusual noise (like a plane or whistling)
	  ▸ Birds/animals moving to higher grounds

T5. Learn and be ready to act on official tsunami watch or warning	• International Tsunami (Stage 1) means there is more than 10 hours warning for possible tsunami heading towards Vanuatu. Be prepared to evacuate. • Regional Tsunami (Stage 2) means a big earthquake in the Pacific Ocean has caused a tsunami approaching Vanuatu. Do not wait. Evacuate to safe place and wait for All Clear. • Local Tsunami (Stage 3) means a tsunami is about to strike Vanuatu. Evacuate immediately. Help vulnerable people and those with special needs. • All Clear means danger has passed, you may return home • Listen for updates on Radio Vanuatu – FM 100 or AM 1125, FM107, and SMS
T6. Work with schools in tsunami risk areas to plan tsunami evacuation	• If school is in an identified tsunami risk area, ensure and learn the school's evacuation routes • Be sure that schools plan for automatic evacuation in response to natural warning signs. • Make plans for safe family reunification after "all clear" is given.
T7. Consider and plan for evacuation needs of all household members	• Plan for evacuation needs of small children, elderly people and those with disabilities. • Practice tsunami evacuation drills

2. TSUNAMI: Reduce dangers

Key message	Context-specific details
T8. Protect your property and livestock	• If long-range warning time permits, secure or move valuable property or animals to a safe place
T9. Prepare evacuation routes and safe places	• Identify safe places and prepare safe routes for getting there.

3. TSUNAMI: Learn response skills

Key message	Context-specific details
T10. Following an earthquake (either big or long) immediately move to higher ground on foot and wait until the "All Clear" is given by NDMO before coming down	• During strong, moderate, and weak earthquake shaking, Drop, Cover and Hold On and count the number of seconds of shaking. Count 'one second, two second…etc' • If strong shaking makes it difficult to stand up, and lasts for 20 seconds, or if moderate or weak shaking lasts for 40 seconds or more, evacuate immediately. • Evacuate to higher ground 30m above sea level or 3km inland. • Follow posted evacuation routes, where present. • If you cannot evacuate to higher ground, evacuate onto roof, up a tree, or grab a floating object. • When you can see the wave, you are too close to outrun it. • Do not stop to collect animals. • Do not try to reunite until you reach safe place, or after "all clear
T11. Stay away from coast, tidal estuaries, rivers and streams	• Tsunamis can travel quickly up rivers, streams and estuaries.

3. TSUNAMI: Learn response skills

Key message	Context-specific details
T12. If you are at sea, stay there	• Boats are generally safer in water deeper than 20 meters. • Ships are safest on high seas in water deeper than 100m. • Use loose mooring and loose anchorage to reduce risk of boats drifting onto land. • Do not return to land until 'all clear' has been issued. Listen to marine and port reports before returning to port
T13. Stay out of danger until an official "all clear" message is received	• Follow family reunification plans after "all clear" message is received. • Return home only after official message is received.
T14. Be aware of and minimize secondary hazards	• Beware of secondary hazards such as contaminated water, damaged roads, landslides, mudflows, and other hazards. • Check your water supply because it may have been contaminated. • Turn off gas in case of leaks • Turn off electricity in case of flooding or damage • Avoid use of contaminated water • Stay out of buildings if there is water around it. They may sink or collapse. • Watch out for wild animals, especially poisonous snakes in water. Use stick to poke through debris. • Avoid tsunami impacted areas and debris in the water. • Expect aftershocks which could generate another tsunami

Floods

Floods can be very high-impact events. Annual flooding is a natural thing that is increase soil fertility. However, human habitation and land-use practices lead to many adverse impacts of floods. Unexpected flooding, caused by the interplay of natural and human factors, occur worldwide.

Natural causes include: high-intensity or prolonged rains, storms and storm surges, sudden release of water held or diverted by debris jams. Man-made causes include: the failure of water containment and drainage systems, human-generated rubbish in riverbeds and run-off channels, deforestation, unsustainable land management, urban cement and asphalt cover.

The two main types of floods are inundation floods (which are slow, developing over hours or days) and flash floods (which occur without warning, in places where there are no streams, generally within six hours of a rain event, or after dam or levee failure). Within these two types, the major kinds of flooding are:

- **River flooding** is a natural event for any river, creek or stream when the catchment receives more water than usual. Development on the flood plain and alteration of the flood plain terrain can cause flooding or make it worse. It may be slow or fast.
- **Run-off from higher ground** - Water flowing from mountains towards the sea may collect in low or flattened areas, creating 'sheet flooding' run-off.
- **Coastal flooding** is inundation caused by sea water above normal tides. Causes can include prolonged or strong onshore flow of wind, storm surges and astronomical tides or tsunamis generated by earthquakes.
- **Estuary flooding** can be caused by sea tidal surges or storm-force winds from a cyclone.
- **Flash** can be caused by torrential rainfall, dam breakage or a landslide.
- **Urban flooding** may be caused by impermeable ground cover (such as concrete and asphalt) that increases run-off two-to-six times more than natural terrain. Urban streets can become swiftly moving rivers due to drainage systems being blocked.

Depending on their size and severity, floods can roll boulders and vehicles, tear out trees, destroy buildings and bridges, bring down power lines, cover roads and low lying areas. Floodwater may reach heights of 3–6m (10–20ft), and can trigger deadly debris and landslides. Debris in floodwater can accumulate in tight passages, creating flooding above the blockage and flash flooding below when the jam breaks. In coastal outlet areas, floodwater can move at 10– 15km per hour (6–10mph), spreading as widely as the terrain permits.

Flood impacts include death, injury, damage to property and infrastructure, severe erosion, landslides, food shortage, contamination of drinking water and deposits of mud, sand and gravel. Floods can lead to loss of shelter and livelihoods, and can disrupt lifeline infrastructure and destroy communities.

1. FLOODS: Assess and plan

Key message	Context-specific details
F1. Know your area's flood risks	• Know the local terrain, water sources, catchment area/s and weather patterns, to better understand the risks, and learn about the elevation of your property and buildings relative to predictable flood levels. • Ask the local community about flooding as well as the historical experience and the potential impact of climate variability and climate change on your area. • Speak with CDCs and communities to ensure any flood risks are being addressed. • Maintain communication with neighbours located above and below you. • Identify industrial activity that may create hazardous materials release and contamination risks during flooding.
F2. Store valuables and dangerous materials above likely water levels	• Keep important papers, equipment, feedstock and other valuables above potential flood levels, using waterproof containers where possible. • Keep hazardous chemicals above anticipated flood levels.
F3. Know and practice your expected flood evacuation plans and routes	• Identify your safe evacuation routes, using any forms of transportation available to you, as well as routes that can be used on foot. • Make sure your household members know and practice where to evacuate to, what route to take, and where to meet if they have to leave.

2. FLOODS: Reduce dangers

Key message	Context-specific details
F4. Select a safe site for your building	• Avoid building or living within 200m of a high-tide coastline. • Avoid building or living on riverbanks, gullies or flood plains, unless you elevate and reinforce your home (with the exception of delta areas, where riverbanks are on high ground).

2. FLOODS: Reduce dangers

Key message	Context-specific details
F5. Build and maintain your home with floods in mind	• If you live in a place prone to frequent or serious flooding, consider relocating, building elevated storage buildings or using floating shelters • If you live on a flood plain, build an appropriate foundation and elevate your home. • Construct wells and latrines in safe places, above expected flood levels.
F6. Protect your home to prevent flooding	• Identify the best methods and construct barriers in accordance with local building regulations to prevent water from entering your home. If you live in an area prone to flooding keep supplies to protect your home. Examples of temporary barrier solutions include washboards, sandbags and anchored heavy plastic sheeting that can be used to channel water away from your building. • If you plan to fight floods with barriers, decide in advance when you will abandon the fight and save your life. Know how to get out of the flooded area, if it is flooded.

3. FLOODS: Learn response skills

Key message	Context-specific details
F7. Stay informed: monitor weather, listen to the radio and follow instructions	• If you are advised to evacuate, or if you think you are in danger, evacuate immediately.
F8. Keep supplies to protect life	• Buy or make a personal flotation device for each household member. • Keep a ladder and rope for escaping to the roof. • Store extra water and food • If you have a vehicle, keep its fuel tank filled in case you need to evacuate

3. FLOODS: Learn response skills

Key message	Context-specific details
F9. During a flood 'Turn around, don't drown.' Stay out of floodwater and evacuate vertically	• Never try to walk, swim or drive through swift water. If you come across flowing water above your ankles, stop, turn around and go the other way. Fast-moving water only 15cm deep can sweep a person off their feet. • Do not expect to outrun floodwater, as it may flow at 10–20km per hour. • If you have not been able to evacuate out of the area, then moving to higher ground or the uppermost floors of buildings. • If you are instructed, or if you have time before evacuating, disconnect heating and cooking or gas tanks and unplug electrical appliances.
F10. During a flood, if you are in a vehicle, avoid unsafe conditions	• Never attempt to cross any flowing water or water-covered roads or bridges, and do not drive around barricades. As little as 20cm of water can cause you to lose control of your vehicle and as little as 50cm (2ft) of rushing water can carry away most vehicles, including trucks. • Standing water may be electrically charged from underground or downed power lines. • Avoid travelling at night. • Move to higher ground, away from rivers, streams, creeks and storm drains. • If your breaks do not work, do not drive your vehicle. If your breaks do work but they become wet, test them on a clear patch of road at low speed. If brakes are not stopping as they should, dry them by pressing gently on the brake pedal while maintaining speed. • If your vehicle stalls in water, abandon it and climb to higher ground. Restarting your engine may cause irreparable damage. • If your vehicle is being submerged, open the windows to escape.
F11. When you hear a flood warning, store extra water	• Stay away from low-lying areas. • Do not drink from, play or swim in water left by floods. • Avoid touching electrical wires that are wet or any water that is in contact with electrical wires.

3. FLOODS: Learn response skills

Key message	Context-specific details
F12. After a flood, start clearing out and drying your home when rain stops and water recedes	• Sewage and toxic contamination is difficult to clean. Contaminated objects may need to be disposed of. • Move everything that is wet outside (weather permitting). • Drain away water under the house. • Keep doors and windows open on dry days. On wet days, leave windows ajar. • Remove mould/mildew.
F13. After a flood, take sanitation precautions	• Service sanitation systems as soon as possible. • Check drinking wells for contamination before using the water. • Use protective equipment for all tasks (including tall boots, long pants, long sleeves, eye protection and gloves). • Wash hands before eating, drinking or smoking. • Use disinfectant when cleaning where possible, if it's not available use soap. • Disinfect any cuts and protect them with a waterproof dressing. • Keep children away during the clean-up. • Bury human waste matter quickly.

3. FLOODS: Learn response skills

Key message	Context-specific details

F14. After a flood, clean up carefully	• Follow these instructions for cleaning specific items:
	  ▸ Paper and photographs:
	  ‣ Place wet photos in cold clear water and separate them. Do not hold them under running water or wipe. Dislodge dirt by moving gently in a tub.
	  ‣ Photocopy the items as soon as possible.
	  ‣ As soon as the pages are unsealed, dry them with a blow dryer or blotting paper.
	  ‣ Don't force pages apart – dry them until they come apart easily.
	  ▸ Computer disks:
	  ‣ Rinse disks, place them in a plastic bag and refrigerate them until you can get professional help.
	  ▸ Clothing and linens:
	  ‣ Shake out mud, hose off dirt and wash items with hot water and disinfectant.
	  ▸ Furniture and appliances:
	  ‣ If appliances are wet, turn off the electricity at main fuse box or circuit breaker. Unplug appliances and let them dry out. Ensure that the electrical system and appliances are checked by a professional before turning power on and using them.
	  ‣ Clean appliances with clean drinkable water.
	  ‣ Check that sewer line is working before using toilet/ latrine.
	  ‣ Discard all food that has been in contact with the water.
	  ‣ Discard plastic or porous kitchen items.
	  ‣ Clean and disinfect refrigerators and other appliances with drinkable water and disinfectant. (However, refrigerators and freezers may not be salvageable.)
	  ‣ Use hot water to wash pots, pans, dishes and utensils. Disinfect and air dry.
	  ‣ Remove the backs of furniture to allow air to circulate.
	  ‣ Do not force open wooden drawers and doors: let them dry first.

Volcanic eruptions

A volcano is an opening, or rupture in the earth's surface that allows hot magma, volcanic ash and gases to escape. They are generally found where tectonic plates come together or separate. Volcanoes pose several hazards: volcanic ash, gases, lahars, landslides, lava flows, and pyroclastic flows.

Volcanic ash includes fine particles of volcanic rock and glass formed during volcanic eruptions, spread over broad areas by wind. It can vary in size from being like grit to as fine as talcum powder. Ash is hard, abrasive, mildly corrosive, conducts electricity when wet, and does not dissolve in water. Ash fall can generate thunder and lightning from friction. Freshly fallen ash can have acid coatings that irritate eyes and lungs, pollute local water supplies and damage vegetation. Ash fall can contaminate water or clog supply equipment. Ash fall can reduce visibility, and make roads very slippery and impossible to pass. Over time the ash is incorporated into fertile topsoil in volcanic regions.

Volcanic gases: Magma contains dissolved gases that are released during eruptions and also may escape continuously. Explosions can also blast fragments of volcanic rock and lava, called tephra (<2mm to >1m diameter) into the air. The most hazardous gases produced are sulfur dioxide, carbon dioxide and hydrogen flouride. Sulfur dioxide can lead to acid rain locally and air pollution downwind. This can also lower surface temperatures and contribute to depletion of the Earth's ozone layer. Carbon dioxide, heavy than air, can flow into low-lying areas and collect in soil, becoming lethal to people, animals and vegetation. Flourine particles concentrated in fine-grain ash may be harmful when ingested by animals.

Lahars (mud or debris flow): Lahar describes a hot or cold mixture of water and rock fragments flowing down the slopes of a volcano and (or) river valleys. When moving, a lahar looks like a mass of wet concrete that carries rock debris ranging in size from clay to boulders more than 10m in diameter. Lahars vary in size and speed. Small lahars less than a few meters wide and several centimetres deep may flow a few meters per second. Large lahars hundreds of meters wide and tens of meters deep can flow several tens of meters per second--much too fast for people to outrun. By eroding rock debris and incorporating additional water, lahars can easily grow to more than 10 times their initial size. Lahars almost always occur on or near strato-volcanoes which tend to erupt explosively.

Landslides: Landslides are large masses of rock and soil in wet or dry state, that fall, slide, or flow very rapidly under the force of gravity. A landslide typically destroys everything in its path. Volcanic landslides can become or trigger lahars, bury river valleys, and cause tsunami.

Lava flows: Lava flows are streams of molten rock that pour or ooze from an erupting vent that rarely extend more than 8km from their vent. Lava flows knock over, bury or burn everything in their path. Most move slowly enough that people can move out of the way. Fluid basalt flows can extend tens of kilometres and travel 1km/hour on gentle slopes up to 10 km/hour on steep slopes, and when confined within a channel reach velocities >30 km/hour. People are rarely able to use land buried by lava flows

Volcanic eruptions

Pyroclastic flows: Pyroclastic flows are high-density mixtures of hot, dry rock fragments and gases that move away from the vent that erupted them at high speeds. They generally follow valleys or other low-lying areas and can deposit layers ranging from <1m to >200m. Most consist of a basal flow of coarse fragments that moves along the ground, and a turbulent cloud of ash that rises above the basal flow. A pyroclastic flow will destroy nearly everything in its path. With rock fragments ranging in size from ash to boulders traveling across the ground at speeds typically greater than 80 km per hour, pyroclastic flows knock down, shatter, bury or carry away nearly all objects and structures in their way. The extreme temperatures (200°C and 700°C) can cause combustion: especially petroleum products, buildings, forest and farmland. On the margins of pyroclastic flows, death and serious injury to people and animals may result from burns and inhalation of hot ash and gases.

1. VOLCANIC ERUPTIONS: Assess and plan

Key message	Context-specific details
V1. Stay informed	• Be aware of the volcanic alert level • Know your volcano hazard map, danger zones and your safe areas • Get volcano bulletins and alerts from Radio Vanuatu (National Emergency Broadcast, FM93 or call #22699 for recorded message.

V2. Community must monitor changes to the volcano and the environment	• Recognize and report these signs:
	  ▸ ash-fall or increase in ash fall
	  ▸ vegetation drying up
	  ▸ rumbling sounds or increased noise
	  ▸ earthquakes
	  ▸ landslides
	  ▸ increased smells from volcano
	  ▸ acid rain or increase in acid rain
	  ▸ other abnormalities

1. VOLCANIC ERUPTIONS: Assess and plan

Key message | Context-specific details

V3. Learn your volcano risks and warning signs

- Become familiar with volcano hazard map and danger zones.
  - Frequently active volcano group (Yasur, Lopevi, Ambrym)
  - Dormant volcano group (Ambae, Gaua, Vanua Lava)

VANUATU VOLCANIC ALERT LEVEL		
TITLE	**LEVEL OF ALERT**	**DESCRIPTION/DISTANCE/AREA**
Very large eruption	5	Danger beyond caldera, or entire and surrounding islands, also chance of flank eruption
Moderate eruption	4	Danger on the caldera and volcanic cone, possibility of very large eruption, also chance of flank eruption
Minor eruption	3	Danger on the crater rim, possibility of moderate eruption, also chance of flank eruption
Major unrest	2	Notable/large unrest, considerable possibility of eruption, also chance of flank eruption
Signs of volcanic unrest	1	Notable signs unrest, possible danger near eruptive vents
Normal	0	No signs of change in the activity, limited danger

V4. Develop plans for evacuation and shelter-inplace

- Develop an evacuation plan for volcanic eruptions and make sure all members of your household and community know and practice it.

V5. Work with schools in volcano risk areas to plan evacuation and shelter-inplace

- Support schools in making plans for volcanic eruption evacuation, sheltering in place, family reunification, and practice it twice a year.

V6. Be aware of secondary hazards associated with volcanic eruption

- Volcanoes can lead to earthquakes, flash floods, landslides, mudflows, thunderstorms, tsunamis.

2. VOLCANIC ERUPTIONS: Reduce dangers

Key message	Context-specific details
V7. Keep volcanic ash out of buildings	• Close all doors and windows • Place damp towels at door thresholds and other sources of draughts • Remove outdoor clothing before entering clean areas.
V8. Protect water supplies from volcanic ash	• Cover water supplies to avoid contamination by ash-fall. • Disconnect drainpipes and downspouts from gutters to prevent drains from clogging and to allow ash and water to empty onto ground. • If you use rainwater collection system disconnect tank prior to ash fall.
V9. Protect machinery and equipment from volcanic ash	• Protect sensitive electronics (e.g. by wrapping with plastic wrap) • Place machinery indoors to protect from volcanic ash or cover with large tarps.
V10. Protect your lungs and eyes from ash-fall, during and after	• Stay indoors and away from volcanic ash-fall areas if possible • The volcanic ash can increase the health risks for children and people with chronic respiratory conditions • If outside, seek shelter (e.g. in a building or vehicle) • Wear goggles to protect your eyes. • Wear mask to protect against lung irritation from small particles. If masks are unavailable use a damp handkerchief or cloth over your nose and mouth. • Protect your skin (e.g. wear long sleeves, long pants and a hat).
V11. Limit driving	• Do not drive unless absolutely necessary. If you must, drive very slowly with your lights on. • If in a vehicle, keep doors and windows closed. • Volcanic ash abrasion can damage moving parts of vehicles, including bearings, brakes, and transmissions.

3. VOLCANIC ERUPTIONS: Learn response skills

Key message	Context-specific details
V12. Follow instructions to evacuate or take shelter	• Follow evacuation instructions issued by authorities (it may seem safe, but may be quite dangerous). • If warning is given before ash-fall starts, go home from school or work • When ash-fall starts shelter-in-place indoors until ash has settled
V13. Protect your lungs and eyes during clean-up	• Put on goggles and mask or wet cloth before starting to clean
V14. Clean up, carefully, outside	• Dampen but do not soak ash before removing by shoveling, to reduce breathing it. • Use caution when climbing on ladders and roofs. Volcanic ash is slippery. • Sweep out gutters. • Do not wash the ash into the guttering
V15. Clean up, carefully, inside	• During clean-up indoors, ensure good ventilation by opening all doors and windows before you start to clean. • Do not sweep or rub dry ash. Instead dampen using water, and dab with damp rag. • Avoid excess rubbing action because sharp ash particles can damage textile fibres and hard surfaces. • Wash/beat textiles outdoors • Unplug electronic equipment before cleaning
V16. Clean up your vehicle	• Use water bottles and a cloth to clean the windscreen. • Clean the engine, radiator, and other essential parts daily, if necessary, using water to flush the ash.
V17. Protect vulnerable people from dust exposure	• Keep children indoors. • Do not play in ash pile. • Do not play in dusty settings and strenuous activity. • Organize child-friendly spaces to free parents for cleaning up. • Those with chronic respiratory conditions such as asthma should stay inside and avoid unnecessary exposure to the ash

4. VOLCANIC ERUPTIONS: Keep response supplies

Key message	Context-specific details

V18. Store additional supplies for volcanic eruption response	• Additional supplies for volcanic eruption response are:
	  ▸ dust masks and eye protection
	  ▸ plastic wrap to protect electronics from ash fall
	  ▸ cleaning supplies
	• Always carry a flashlight, even during the day.

V19. Store clean water and food	• Collect and store clean water in closed containers, in advance. (20-30L per person in household) • Store food in closed containers. • Avoid drink water which has ash in it. If you have no choice, and if there is ash in the water, let it settle, collect the clear water and boil it before you use it. Ash-covered vegetables are safe to eat after washing with clean water.

Cyclones

Tropical cyclones are relatively slow-moving but severe storms with fast rotational winds of at least 120–320 km per hour or 74–200mph (65 knots). They have an 'eye': a central calm area. Maximum power is close to the 'wall', or outer edge, of the eye. Depending on where 'cyclones' are located in the world they could also be referred to as typhoons or hurricanes. Here in Vanuatu they will always be referred to as cyclones.

Major hazards associated with tropical cyclones are: strong winds, storm surges and torrential rainfall. Strong winds from the cyclone can destroy or damage houses and infrastructure, and topple power lines and trees. Strong winds can also cause very rough seas which result in powerful and destructive waves. Storm surges from cyclones can cause coastal flooding and coastal inundation. Finally, torrential rainfall may cause rivers to overflow and flooding of low lying and flood prone areas.

Impacts include deaths (mostly flood-related or sinking ships, but also from electrocution and the impact of collapsing structures and blowing debris), property and infrastructure damage, severe erosion, destruction of standing crops and vegetation, landslides, deposits of mud, sand and gravel, food shortages and contamination of drinkable water. These effects can lead to loss of shelter and livelihoods, disruption of transportation and critical lifeline infrastructure and destruction of community.

1. CYCLONES: Assess and plan

Key message	Context-specific details
C1. Know your area's risks related to cyclone	• Know the risks and impacts of the locations where you reside
C2. Know your cyclone advisory and Blue, Yellow and Red alerts	• A cyclone advisory means there is a potential for cyclone conditions within the next 48 hours. ▸ Blue Alert: cyclone potential in 24-48 hours ▸ Yellow Alert: cyclone within 12-24 hours. ▸ Red Alert: cyclone is coming now.

1. CYCLONES: Assess and plan

Key message	Context-specific details
C3. Make an evacuation plan and practice it: know your shelter destination, evacuation route and transportation method	• If evacuation is necessary, work with your community to determine various transportation options. • Work with your community disaster committee member and community to ensure they are aware of any family or community members that made need assistance and/or transportation. • Practice your evacuation plan at least twice a year, ensuring your household members know where to go, the route to take and where to meet each other
C4. Work with your community to identify local cyclone shelters	• Identify cyclone safe shelters and get them ready. • Make sure everyone in the household knows where the safe shelter or location is and how to get to it.
C5. Work with your community for strategic placement of water and food	• Work with CDCs, community, churches and schools to keep drinkable water, food, cooking items, and blankets in evacuation shelters.
C6. Store valuables up high	• Keep important things (i.e. electronics, identification documents, etc.) in waterproof containers or plastic bags preferably above potential floodwater.

2. CYCLONES: Reduce dangers

Key message	Context-specific details
C7. Build and maintain your home with severe tropical storms in mind	• Put shutters on windows and doors, to protect from objects blown by wind. • Be sure that roofs are securely fastened. For traditional housing use coconut leaves to fasten the roof down. • Remove guttering to safeguard your gutters and to reduce water build up on your roof • Inspect your house, including your roof, and make repairs before storm season

2. CYCLONES: Reduce dangers

Key message	Context-specific details
C8. Keep trees and bushes well-trimmed	• Cut down branches and trees that may fall or be broken during strong winds that could cause damage to your house.

C9. Prepare and maintain emergency kit	• Emergency kit should include:
	  ▸ Food
	  ▸ Water
	  ▸ Personal items (i.e. Identification documents, phone, laptop, etc.)
	  ▸ Personal medications
	  ▸ First aid kit
	  ▸ Torch & spare batteries
	  ▸ Windup/battery operated radio
	  ▸ Spare clothes and/or blanket
	  ▸ Vanuatu cyclone tracking map

3. CYCLONES: Learn response skills

Key message	Context-specific details
C10. Stay informed	• Monitor the weather closely. • Call the MET office at #22932 for weather updates (if you have credit) • Listen to radio and television for information (Radio Vanuatu – FM 100 or AM 1125) • Keep an eye out for text message from your phone provider giving the latest updates
C11. Keep supplies to protect your home	• Keep supplies on hand to protect your home (e.g.. plywood, tarpaulin, nails, hammer, ropes, saw, crow bar, sand, shovels, bags (to fill with sand or gravel), coconut leaves).

3. CYCLONES: Learn response skills

Key message | Context-specific details

IF YOU RECEIVE A CYCLONE ALERT:

C12. Blue Alert means a cyclone potential within 24-48 hours. Prepare your property for high winds and surge waters

- When you get a Blue Alert:
  - Tie down roof.
  - Trim crops.
  - Secure or bring inside loose items that can become flying objects.
  - Prepare emergency kit, food and water.
  - Prepare evacuation shelters.
  - Ensure storm shutters, wood or other protective materials are out and ready to be secured
  - Prepare sandbags or plastic sheeting, to stop water getting in through doors, lower windows or vents.
  - Check your personal supplies, including prescription medications and first aid kit.
  - Check that your evacuation supplies and your emergency bags are ready, including water, food, emergency contact information. Wear rain boots if possible.
  - Charge mobile phone batteries.

C13. Yellow Alert means cyclone potential within 12-24 hours. Evacuate to safe shelter

- School and government are closed.
- If you are advised to evacuate, live in a temporary or lightweight structure, or if you think you are in danger, be sure to evacuate early to planned shelters.
- You need to evacuate if you live on the coast, on a flood plain, near a river or on an inland waterway. Bring your pets indoors. Be ready to take them with you if you evacuate.
- Listen to the radio or TV for information.
- Secure/close storm shutters or board up windows from the outside.
- Stay informed: Listen to the radio, watch TV, look for text message updates
- Fill containers with drinking water, and fill buckets with water for sanitation.
- Ensure your car has a full tank of fuel in case you need to evacuate

3. CYCLONES: Learn response skills

Key message	Context-specific details
C14. Red Alert means cyclone is here. Stay indoors	• Stay indoors and wait until cyclone has passed. • Turn off electricity, gas supply and water, if you are told to do so. • Keep your pets and service animals indoors until the cyclone has passed • Do not evacuate during the storm • Stay indoors, away from windows, skylights and doors. • Remain on the floor least likely to be affected by strong winds as well as storm-surge floodwaters. • Take refuge in a small interior room, hallway, or closet. • Be aware that the 'eye of the storm' is calm and quiet. The storm is not over. If things seem calm, it is probably the lull at the center of the storm, so maintain your secure position and do not go outside as the winds will get stronger again.
C15. If you are in a building, turn off utilities and gas tanks and unplug small appliances	• Stay on lower floors but above basement and ground floors, which may flood. • Stay in a small room • If you are instructed, or if you have time before evacuating, turn off all utilities and cooking or heating gas tanks. Unplug small appliances.
C16. After the storm passes, check on neighbours and help anyone who is injured or trapped	• Give first aid where appropriate. • Do not move seriously injured people unless they are in immediate danger of further injury. • Seek professional medical help for serious injuries.
C17. After the storm passes, stay safe	• Check for building damage and stay out of damaged buildings. • Beware of ground-level and above-ground hazards – especially flood and electrocution hazards. • Practise good hygiene and avoid potentially contaminated food or water.

Epidemics

An epidemic is when infectious disease that spreads through human populations across a large region, Epidemic become disasters when they are associated with large numbers of deaths, as well as illness.

Epidemic are caused by contamination hazards. Examples are:

- airborne (such as flu, tuberculosis, measles)
- conveyed by body fluids (such as polio or HIV) and Hepatitis B, Yaws)
- water borne (cholera, e. coli, dysentery) diarrhoea diseases
- food borne food poisoning
- soil borne hookworm
- vector borne (transmitted from animals to humans (such as the, malaria, dengue).

Epidemic can be prevented through a variety of measures, such as:

- eating safe and healthy food
- access to clean water
- hand washing
- vaccination
- proactive surveillance
- vector control
- accessing

1. EPIDEMICS: Assess and plan

Key message	Context-specific details
P1. Vaccinate children against killer diseases	• Maintain vaccination cards for babies and children. • Keep vaccinations up to date. • Participate in vaccination campaigns • Vaccinate against polio, diphtheria and measles. • Do not re-use needles.

2. EPIDEMICS: Reduce dangers

Key message	Context-specific details

P2. Keep your household and community clean	• Dispose of waste property
	• Keep your house clean and safe
	• Reduce/remove areas where water collects) e.g. uncovered drums, buckets, pots, old tyres, coconut shells
	• Use water sources with care and maintained them in a good condition.
	• Risk factors include:
	  ▸ unprotected water sources
	  ▸ leaking septic tanks and latrines
	  ▸ contaminated surface water run-off entering wells and springs
	  ▸ animals using the same source as people
	  ▸ objects falling into a well.
	• Learn and practise reliable methods for purifying water for your household

P3. Use clean water for drinking washing and preparing food	• Use clean vessels and closed containers for transportation and storage. • Keep water clean during collection, transportation and storage. • Take drinking water from storage vessels using a clean dipper or ladle so that hands, cups and other objects cannot contaminate water. • Remove standing water that may attract insects and become contaminated.
P4. Wash hands very well with soap	• Always wash your hands after using the toilet, and before and after handling food and eating. • Always wash your hands before and after any contact with sick people
P5. Keep food clean	• Wash fresh food in clean water before cooking /eating • Cook meat fish and eggs well • Separate raw meat and fish from other fresh foods • Keeps flies and insects away from food • Clean hands before preparing and eating food

2. EPIDEMICS: Reduce dangers

Key message	Context-specific details
P6. Dispose of human waste safely	• Dispose of waste safely for humans, animals and the environment. • Use toilets rather than going to the bush or sea, to prevent spread of dangerous diseases. • If toilets are not available, go to the toilet well away from houses, water sources and places where children play. Bury faeces immediately or cover with earth, sand or ash. • Locate trench and pit toilets away from water sources (raised, where there is a shallow water table) keep them clean and cover with a lid. • Make sure pit toilets are emptied or replaced regularly by trained people with mechanical and protective equipment, rather than manually.
FOR AIRBORNE DISEASES	
P7. Cover your mouth	• Always cover your coughs and sneezes. Cough or sneeze into your elbow or into a scarf, tissue or handkerchief. Do not cough or sneeze into the air. If you cough or sneeze into your hands, wash them immediately with soap and water.
P8. Keep your distance	• When there are contagious diseases going around, keep a safe distance and avoid crowds if possible. Stay 1–2m away when talking to people. Do not shake hands or kiss people as a greeting. .
P9. Blow your nose on a leaf or cloth	• Blow your nose on a leaf or cloth that can be washed or thrown away • Do not blow your nose or your children's nose on your clothes • Throw out waste, and tissues properly by placing them in a bag and sealing it, before burning or burying them.
P10. Let fresh air indoors	• Let fresh air in and to let the airborne germs out.

2. EPIDEMICS: Reduce dangers

Key message | Context-specific details

FOR AIRBORNE DISEASES

P11. Separate and care for your sick

- In order to limit the spread of the illness within the household:
  - Separate family members who are sick into one room or corner of the house, or outside if the weather allows.
  - Use only one person who look after the sick person– preferably a family member who is not at high risk. The caregiver should use safety measures – for example, using a fabric or scarf over the nose and mouth when less than 1m (3ft) from the person who is sick. Put different clothing on when you are in the room and change clothes before leaving the room. Wash hands after providing care.
  - Other family members should monitor themselves daily for fever and cough. Make sure that young children, pregnant women and people who have another disease receive medical care if they get sick.

FOR BODILY-FLUID BORNE DISEASES

P12. Practise safe sex

- Do not engage in unprotected sexual activity. Use a condom.

FOR VECTOR BORNE DISEASES

P13. Be careful handling and slaughtering animals

- Never touch sick or dead animals without protection.
- Bury animals

P14. Limit mosquitoes in your environment

- Sleep under mosquito netting to reduce exposure to malaria-carrying mosquitoes.
- If possible, cover window and doors with fly screens
- Reduce /remove areas where water collects (e.g.. uncovered buckets, drums, pots, old tyres and coconut shells)

3. EPIDEMICS: Learn response skills and keep response supplies

Key message	Context-specific details

P15. Use personal protection equipment	• Personal protection equipment includes:
	  ▸ fabric or scarf, protective glasses or goggles
	  ▸ gloves
	  ▸ fabric or scarf to cover your head
	  ▸ use soap or disinfectant in alcohol base for washing hands.

P16. Take care of yourself	• Maintain good personal hygiene. Eat healthy food • Reduce stress and avoid smoking. Have regular health check ups • If you have contagious symptoms, stay at home. Exercise regularly • Wear a fabric or scarf over your nose and mouth when close proximity to someone who is ill or may be contagious.
P17. Manage fever	• Cool the body down and drink lots of fluids. • Sponge body with cloth/soaked in cool water
P18. Drink lots of water if you have diarrhoea	• Drink lots of fluids like clean water, ORS (oral rehydration solution) soup, rice water, unripe or overripe coconuts • Continue breastfeeding your baby/hibiscus flower/leaves • If ORS in not available, I cup clean water, ½ tsp sugar, 4 pinch of salt
P19. Breastfeed	• Breastfeed babies to provide healthy nutrition.
P20. Wash yourself regularly	• Bathe often, using clean water and soap or clean sand.
P21. Seek medical attention for anyone who cannot be treated at home	• If someone needs medical care, go to the nearest health clinic or hospital to get help.

3. EPIDEMICS: Learn response skills and keep response supplies

Key message	Context-specific details

P22. Store enough food at homes and grow enough food in your garden for times of disaster	• Consider whether you may face:
	  ▸ Self-sufficient: maintaining a sustainable income and other means of living, and sustainable access to sufficient food
	  ▸ Food insecure: sustainable income and other means of living, but without access to enough food due to disruptions in the market
	  ▸ Food and livelihoods insecure: without a sustainable income and at the same time unable to access and/or afford enough food. This is the most vulnerable level.

P23. Follow medical advice	• Finish taking medications as directed by health professional • Listen to all messages sent through authorities

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