



# Key Messages for Disaster Risk Reduction and Resilience in Solomon Islands:

A Guide For Public Education & Awareness



SOLOMON ISLANDS GOVERNMENT  
METEOROLOGICAL SERVICES DIVISION  
MINISTRY OF ENVIRONMENT CLIMATE CHANGE DISASTER MANAGEMENT AND METEOROLOGY





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The Ministry of Education and Human Resources 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**



**UNISDR**

The United Nations Office for Disaster Risk Reduction



**International Federation  
of Red Cross and Red Crescent Societies**

# 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 Solomon Islands 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 Solomon Islands, 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:

- Households and Individuals
- Community leaders, trainers and members
- School disaster management committees and teachers
- Agencies and ministries who provide education and awareness to the public

The guide can be used to:

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

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.



# Section A: All-hazards household and family disaster prevention





# Section A: All-hazards household and family disaster prevention



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.



Prepared 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

### 1.1. 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 and identify who is most exposed to different hazards. WHERE & WHY?
- Learn about the contact information, roles and responsibilities of government agencies in assessing and reducing risks, issuing early warnings and planning for response.
- Expect the unexpected!

### 1.2. Assess individual capabilities and needs

- Identify each person's individual needs and capacities. Consider all ages and functional needs – especially those related to communication and mobility.
- Create a support a support network to help anyone with special needs
- Being prepared is everyone's responsibility. You can make the difference!

### 1.3. Discuss and Make a simple and practical plan

- Include all household and extended family members in your planning process. Discuss your vulnerabilities, risks, actions, and resources needed.
- Decide who will do what, when, and how it will get it done.
- Practise and update your plan regularly, to reduce your risks and to prepare for those you cannot eliminate.
- Plan for different hazards and scenarios
- Make plans for evacuation routes, environment including household exit route and family reunification plan

# ALL-HAZARDS HOUSEHOLD PLAN:

## 1. ASSESS & PLAN

### Key message

### Context-specific details

#### 1.4. Consider access and functional needs and create and prepare a support network

- Consider the access and functional needs of each member of your household during a disaster. If anyone will need help, for any reason, plan now for a network of neighbours, friends, and co-workers to provide assistance during an emergency.
- Use your imagination and your network to problem solve.
- Make sure your network knows how to operate any personal equipment that you may need in case of emergency.

#### 1.5. Keep emergency contact and health information available

- Make emergency contact and health contacts available where it can be easily found during a disaster and share it with you household and extended family members.
- Pre authorise emergency contacts for school and child care pickups.

#### 1.6. Learn and participate in your community's early warning systems

- Learn and participate in your community, school and workplace early warning.
- Take warnings seriously and heed them
- Follow evacuation instruction without hesitation
- Do not return home until local authorities say it is safe to do so.

#### 1.7. Make an evacuation plan: know your shelter destination.

- Identify safe places and access routes and ensure everyone is informed.
- Plan alternate evacuation routes and methods, and practise your routes.
- Work with your network to determine your transportation method if evacuation is necessary.
- Ask your local emergency manager about community plans for directed evacuation and transportation options.

#### 1.8. Keep copies of important personal documents

- Make and Keep copies of your important personal documents in sealed containers, your evacuation bag, out-of-area-contact, safe deposit box, and electronically (for example, phone, flash drive, hard disk or memory stick).



# ALL-HAZARDS HOUSEHOLD PLAN:

## 2. MITIGATE RISKS: Physical or environmental

Key message

Context-specific details

### 2.1. Construct your home in a safe place.

- Consider possible hazards before selecting the site for your home.
- Learn and follow your area's building codes (Urban)
- Design, build and maintain your homes in compliance with building regulations to protect from hazards.

### 2.2. Take annual home maintenance measures to keep your home safe.

- Carry out regular check to identify and correct conditions that make you safer from the hazards you face.

### 2.3. Practise home fire prevention

- Do not permit smoking in indoors.
- Keep matches, lighters and flammable products away from children and from heat sources.
- Never leave a mosquito coil (burning) or candle burning unattended.
- Avoid overloading electrical circuits.
- Check and repair broken, frayed or exposed wiring in your homes.

### 2.4. Store hazardous materials safely

- Isolate and separate hazardous materials
- Store poisons and flammable products securely in closed, metal cabinets for safety.

### 2.5. Practise good hygiene and sanitation

- Wash hands well, using soap and water or sand.
- Use proper built toilets to dispose human waste.
- Protect water and food supplies from contamination.

### 2.6. Minimize use of available resources

- Conserve important resources
- Monitor and reduce your water and power (Solar, electricity, batteries etc.) use.

# ALL-HAZARDS HOUSEHOLD PLAN:

## 3. PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

### 3.1. Learn how to turn off your utilities

- Learn where, when and how to turn off utilities (water, gas and electricity).
- Store solar batteries in dry place.
- If you need to, keep tools available.

### 3.2. In case of power outage, take fire precautions

- Extinguish all flames and never light any flame (including cigarettes, matches or candles) after a disaster.
- Use only battery-powered lanterns, torches/ flashlights until you are sure there is no danger of escaping gas or spilt fuel.

### 3.3. 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.

### 3.4. Extinguish small fires

- Extinguish small fires within the first two minutes of ignition by depriving them of fuel, air or heat.
- Put a fire extinguisher (ABC), bucket of sand or fire blanket in place and learn how to use it. Remember to have your fire extinguisher maintained.
- Before you fight the fire, keep your back to your escape route and stand 1.8–2.5m (6–8ft) away from the fire. If possible, have a helper immediately behind you for safety.
- Practise 'PASS': Pull the pin. Aim at the base of the flame. Squeeze the handle. Sweep at the base of the fire.
- In case of a stove-top fire, cover the burning pan with a fire blanket or damp (not wet) cloth and lid, take it off the burner, and leave it covered for at least an hour.
- Never use water or foam extinguishers on an oil or an electrical fire.

# ALL-HAZARDS HOUSEHOLD PLAN:

## 3. PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

### 3.5. Use the correct fire extinguisher for the situation

- Use the proper extinguisher:
- pressurized water for Class A ordinary fires, such as burning wood, paper, cardboard, plastics and textiles
- carbon dioxide for Class B flammable liquids, such as burning oil, gasoline, paint and grease and Class C energized circuits, such as electrical or computer fires
- dry chemical powder for fires in Class A, B or C.

### 3.6. 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.

### 3.7. 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. PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

### 3.8. 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.

### 3.9. 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.

### 3.10. 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.

### 3.11. Familiarize yourself with household water-treatment methods to purify water

- If the water source is not clean or water is not stored properly, use rain water or boil water before drinking and cooking.

### 3.12. After hazard impact, help those around you, take care of yourself, check for damage and volunteer to help your community

- First, check your own security and safety including injuries, followed by that of those immediately around you, before moving or going to help others.
- 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. Wear protective shoes, clothing and gloves

# ALL-HAZARDS HOUSEHOLD PLAN:

## 4. PREPARE TO RESPOND: Storing provisions

Key message

Context-specific details

### 4.1. Update emergency contact telephones Number

- Make sure you have a list of all updated emergency numbers

### 4.2. Store water and food

- Store enough clean water for drinking and food to survive for about a week.
- Keep the water and food in clean, closed containers away from dirt and flies.

### 4.3. Store response provisions at home, work and school

- Keep the following disaster provisions in a secure place – outside your home, where possible:
  - ▶ Enough non-perishable food to last for at least seven days. Remember infant and other special dietary needs (check expiry dates every six months).
  - ▶ dust mask to filter contaminated air
  - ▶ Torch – either solar or wind-up, or with extra batteries.
  - ▶ plastic bags and ties for personal sanitation
  - ▶ liquid bleach for water purification
  - ▶ plastic sheeting and duct tape to seal windows and doors for hazardous materials release
  - ▶ paper and markers
  - ▶ multi-purpose pocket knife tool
  - ▶ matches
  - ▶ a whistle, to signal for help
  - ▶ a telephone with extra battery or power storage
  - ▶ Make a list of needed items during emergency.

# ALL-HAZARDS HOUSEHOLD PLAN:

## 4. PREPARE TO RESPOND: Storing provisions

Key message

Context-specific details

### 4.4. 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) 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 records
  - ▶ Cash.
- Take this bag when you evacuate.

### 4.5. Purify water

- Boil all drinking water
- Expose water to sunlight for 6 – 8hrs
- Use purification tablets to purify water (2 tabs per 10 litre water and dissolve for 10 – 30 minutes)





# Section B: Hazard-specific messages





# Drought

A drought occurs over a long period of time consisting of a long dry weather with low rainfall that results in reduced groundwater surface water and/or dam levels. The shortages of water for drinking, sanitation and irrigation have an impact on ability to sustain agriculture, livestock and livelihoods, and can lead to food insecurity, spread of disease, malnutrition and starvation, migration and dislocation, and economic losses.

However, they are also impacted by the human land-use degradation, dam construction 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 & PLAN

### Key message

### Context-specific details

#### 1.1. Be informed

- Listen to the weather reports to learn about early warning for drought.

#### 1.2. 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.
- Work with local water suppliers to develop a water conservation plan.
- Plan your own land use with water conservation in mind

# 1. DROUGHT: ASSESS & PLAN

## Key message

## Context-specific details

### 1.3. Participate in planning for rationing of water and food

- Plan for rationing, preserving & storing of water and food supplies.
- Collect, store and manage water safely in large containers like covered tanks and drums for storage over long periods of time. It is important to prepare and stock up for your family.

### 1.4. Approach water as a community resource, and plan accordingly

- Work with local authorities wherever possible to plan for and reduce the impacts of water shortages.
- Identify water resources and learn how to conserve and extend them.
- Plan your own land use with water conservation in mind.

### 1.5. Schools should plan for water usage & rationing

- Make a place for students to wash their hands (tippy tap) near school toilet, so water is easily available for hand washing.
- Teachers and school management must collect, store and manage water safely in large containers like covered tanks and drums for storage over longer periods of time. It is important to prepare and stock up for your students and teachers.
- Teachers must ensure that students follow good hygiene practices
- Parents please make sure that your children take enough of their own drinking water to school from home.
- Children please make sure that you look after your drinking water that you take from home.
- Where community water tanks are located at the school
  - Teachers please ensure that access to water in the community is managed carefully.

### 1.6. Assess epidemic risks and plan for prevention

- Stay in contact with your clinic and learn about:
  - ▶ how to keep water clean or purify it
  - ▶ good sanitation and hygiene practices
  - ▶ the airborne, water-borne or vector-borne risks you may face

## 1. DROUGHT: ASSESS & PLAN

### Key message

### Context-specific details

#### 1.7. Water, Sanitation and Hygiene

- Boil water if possible – use filter or chlorination as per instructions if boiling is not possible
- If water is dirty, sieve or filter through a clean cloth or let the water settle.
- Keep your drinking water safe. Always store your drinking water in clean containers or recycled bottles with a sealed tight lid to keep out dust, insects and animals from contaminating your drinking water.

#### 1.8. Plan to improve your household food security

- Plant sups sup gardens.
- Set up seed banks.
- Store and keep some seeds for future use
- Look for alternative sources of income to fill the food gap.
- Monitor the grazing grounds for livestock.

## 2. DROUGHT: MITIGATE RISKS: Physical or environmental

### Key message

### Context-specific details

#### 2.1. Participate in community water resource management

- Protect water sources less and from contamination and minimize waste.

#### 2.2. Prevent deforestation and practise reforestation

- Protect water catchment areas from deforestation.
- Re-forest water catchment areas.

## 2. DROUGHT: MITIGATE RISKS: Physical or environmental

### Key message

### Context-specific details

#### 2.3. Conserve water in soil through sustainable agriculture and landscaping practices

- Cover crop areas with dead leaves and other crop such as peuroria, legumes plants to capture & retain water. Plant drought resistant crops such as banana, swamp taro, yam
- Grow small crops under taller bigger fruit/coconut trees. For example, for planting Kumara or cassava under coconut trees.
- Agriculture – bucket drip irrigation
- Agriculture – add compost and organic manure to help conserve soil moisture.
- Agriculture – plant more trees
- Agriculture – Kill and Sell animals to reduce numbers before they lose condition or die.
- In your garden plant a mix of different crops on slope side planting, plant lemon grass or vetiver to reduce run off & water loss Avoid slash and burn agriculture.
- Practising crop rotation with more than two species.
- Use compost and Animal Manure

#### 2.4. Conserve water by minimizing outdoor usage

- Inspect pipes and outdoor taps for leaks, and repair them.
- Store water for your household.
- Cover wells
- Harvest rainwater in above-ground or below-ground tanks. (Note: the water may need to be boiled before it is safe to drink.)
- Recycle used water for toilet, livestock and home gardens.
- Conserve water outdoors by cleaning pathways with a broom (not water), washing cars with a bucket,

#### 2.5. Conserve water by minimizing indoor usage

- Inspect pipes, taps and toilets for leaks, and repair them.
- Conserve running water at home. For example:
- Turn off taps when brushing teeth or shaving.
- Take shorter showers.
- Clean vegetables and wash dishes in a basin rather than under running water.
- Install composting toilets or Ventilation improved Pit, or place a brick or sealed bag of water into toilet cistern to reduce flush water.

## 2. DROUGHT: MITIGATE RISKS: Physical or environmental

Key message

Context-specific details

### 2.6. WASH/Health

- Wash your hands with seawater and sand if you stay by the coast
- Hand washing - You can use ash or coconut husk if soap is not available

### 2.7. Protect your family

- Protect your family during drought season. Cover your mouth and nose from dust to prevent respiratory infections
- Look out for symptoms of malnutrition such as big belly, skin rashes, skin infections, stunted growth
- Health – Look for symptoms of diarrhoea, such as loose stool or more times in a day.
- go to the nearest clinic if anyone has these symptoms
- Prioritise feeding children, pregnant and lactating women to eat food that is available.
- Breastfeeding is the best way to feed children from birth to 2years of age and beyond. Children 0-6months of age need only breast milk. Older children than 6 months to two years and beyond still need breast milk with some semi-solid food daily to keep them growing healthy.
- Keep your family's food safe and away from anything that can make it spoiled such as dust, flies, cockroaches and rats. Do not eat spoiled food it can make you sick.
- As much as you can, be sure to keep a clean and hygienic environment for food handling, preparation and storage, and serve purified/boiled water to family members especially children.
- Store and preserve foods from your gardens so they can be consumed and not rot due to dry weather.

\* Kadihasanoğlu, A. Guide on How to Secure Food and Livelihoods of Communities in a Pandemic Influenza. Geneva: IFRC, 2009.



### 3. DROUGHT: PREPARE TO RESPOND: Storing provisions

Key message

Context-specific details

#### 3.1. Preserve and store food year round

- Dry and preserve fruits, fish, nuts etc.
- Plant/preserve traditional edible food/leaves

#### 3.2. Learn principles of good nutrition

- Every person needs 1.5-2L or 8 cups of water per day
- For good nutrition, eat A balance diet from the three food group;
  - ▶ Energy food (e.g. cassava)
  - ▶ Protective food (Fruits & vegetables like slippery cabbage, pawpaw)
  - ▶ Protein food (fish, chicken, beef & pork)

#### 3.3. Response to care for your livelihood

- Use fodder to sustain the most important animals: mothers and kids, and other productive asset animals.
- Keep part of the income from the de-stocking for re-stocking after the drought crises.
- Use veterinary services to ensure the health of your livestock.
- Animal Husbandry – slatted floors for pig pens to collect & use for manure
- Animal Husbandry – look for natural pasture (such as Para Grass, elephant grass, Guatemala) near river banks and road sides, below big trees.



# Earthquakes

Earthquake is a violent shaking of the earth's surface. Earthquakes can easily destroy houses. Earthquakes can also cause 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.

Each year around the world there are about 15 major earthquakes, 135 strong earthquakes and more than 1,000 moderate earthquakes each year. However, only 70–75 of these are reported to cause damage. Their impacts differ widely and depend a great deal on the resilience and preparedness of human settlements. Vulnerability factors include:

- compliance with building codes established for expected intensity of shaking
- land-use planning
- building locations
- critical infrastructure
- non-structural measures to secure building contents and equipment
- Practised response.

## 1. EARTHQUAKE: ASSESS & PLAN

### Key message

### Context-specific details

#### 1.1. Identify safest places

- Identify the safe places where you can protect your head and avoid heavy falling objects

#### 1.2. Earthquake is unpredictable

- Your family and community must be prepared at all times

## 2. EARTHQUAKE: MITIGATE RISKS: Physical or environmental

### Key message

### Context-specific details

#### 2.1. Select a safe site for your building

- Find out from local authorities where earthquake risks are highest in your local area.
- Locate buildings on stable, solid, dry ground Avoid building on unstable slopes.

#### 2.2. Build and maintain your building with earth-quakes in mind

- Choose the right foundation for your soil type Make sure that the parts of the structural system (such as the columns, beams and walls) are continuous, evenly distributed and well connected.
- Use the appropriate quality and quantity of materials.
- Protect your building from water and moisture damage.
- Review the overall safety of your building annually.

#### 2.3. Repair and retrofit for life safety

- Whether you are a homeowner or a tenant, there are things that you can do to improve the structural integrity of your home. Anything you do to strengthen your home could reduce the risk of death and injury.
- Where possible, consult a qualified engineer or skilled professional to help identify your building's weaknesses and fix them. Check that the person you hire is fully qualified in anti-seismic building techniques, has full knowledge of local regulations, and follows them rigorously.
- Check for:
  - ▶ inadequate foundations
  - ▶ unbraced walls
  - ▶ discontinuous columns or beams
  - ▶ damage to concrete
  - ▶ unreinforced masonry
  - ▶ rotting wood
  - ▶ vulnerable pipes
  - ▶ In frame buildings that supporting columns and beams are evenly spaced, continuous, and well-connected.
- Check for any building adaptations or alterations that might have adversely affected the safety of the structure.
- Implement retrofit. Even minimum retrofit is effective in preventing total collapse of structures, saving lives.

## 2. EARTHQUAKE: MITIGATE RISKS: Physical or environmental

Key message

Context-specific details

### 2.4. Move or secure objects that may fall or hurt someone or block exits

- Secure large objects and furniture that could fall, break, slide or collide during an earthquake and cause injuries.
- Your choices are to relocate, remove, 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.
- 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.
- Store all heavy objects lower than the head of the smallest child

## 3. EARTHQUAKE: PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

### 3.1. Practise earthquake drills at home, work or school.

- Practise earthquake drills, Considering the impact of strong shaking and identify the safest actions in each place (at home, work and school).

### 3.2. Take immediate action for safety

- Extinguish any and all flames.
- If you are near an exit door, open it a little so that if it becomes misshapen it will not be stuck closed.
- Remain calm and look around to assess the situation before moving

### 3. EARTHQUAKE: PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

#### 3.3. 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 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 car, pull off the road to a clear area and stop the car
- After the main shaking stops be careful
- Put on sturdy shoes before you move around
- If it is dark use a torch
- After the main shaking stops if you are indoors, move cautiously and evacuate the building.
- Take your evacuation bag with you
- Extinguish flames and put out small fires
- Check for damage
- Stay away from damaged buildings

#### 3.4. 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

#### 3.5. After the shaking stops

- Help people who are trapped or hurt
- Assess your building for damage
- Make sure that your house is safe in case of another earthquake



# Floods

Floods can be very high-impact events. Annual flooding is a natural phenomenon long associated with increased soil fertility, but human habitation and land-use practices lead to many adverse impacts. Less frequent but 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, drought. Man-made causes include: the failure of water containment and drainage system, human-generated refuse 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.
- Outburst flooding is created by unexpected dam or glacial breakage.
- 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, while basements and viaducts can collect water.

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 fill basements. Floodwater may rise to several storeys, reaching heights of 3–6m (10–20ft), and can trigger deadly debris slides. 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, ground instability, 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. FLOOD: ASSESS & PLAN

### Key message

#### 1.1. Know your area's flood risks

### Context-specific details

- Know the local terrain, historical experience water sources, catchment area and weather patterns, in your community to better understand the risks.
- Identify industrial activity that may create hazardous materials release and contamination risks during flooding.

#### 1.2. Keep important documents, valuable and hazardous chemicals above potential flood level.

- During wet season store food and drinking water high above ground

#### 1.3. Consider relocating or mitigating and adapting

- If you live in a place prone to frequent or serious flooding, consider relocating, building elevated storage buildings or using floating shelters.

#### 1.4. Plan to protect your animals

- Consider precautionary evacuation of your livestock and pets depending on the risk level of floods.

#### 1.5. Know your areas expected flood evacuation routes

- Identify your safe evacuation routes and the most safest available, using any means of transportation available to you,

## 2. FLOOD: MITIGATE RISKS: Physical or environmental

### Key message

#### 2.1. Select a safe site for your building

### Context-specific details

- Avoid building or living very close to the coastline, river banks and flood prone areas.

#### 2.2. Build and maintain your home to withstand flooding

- If you live on a flood plain, raise your building on an appropriate foundation and planning system for flooding.
- Construct Proper drainage and retention wall to withstand flooding

## 2. FLOOD: MITIGATE RISKS: Physical or environmental

Key message

Context-specific details

### 2.3. Maintain water channels

- Keep water channels, drainpipes and gutters clear of debris.

### 2.4. Provide a raised plinth for animals

- If you have livestock or large animals that cannot be transported, create a raised plinth, with access, so that the animals can move to higher ground in the event of flooding.

### 2.5. Construct barriers to prevent floodwater from entering buildings

- Construct levees, berms or flood walls in accordance with local building regulations, to prevent floodwater from entering your building.
- Identify the best methods to prevent water from entering your home, e.g. Temporary barrier solutions, WASH boards, Sand bags, anchored heavy plastic sheeting to channel water way.
- Decide in advance how to get out from flooded area.

## 3. FLOOD: PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

### 3.1. Practise evacuation routes

Make sure household members know when and where to evacuate to, what route to take, and where to meet.

### 3.2. Stay informed: monitor weather, listen to the radio and follow instructions

- Monitor the weather closely. If there is a HEAVY RAIN ALERT, there is a potential for flooding. If there is a HEAVY RAIN WARNING, there is a high risk of flooding. If you think you are in danger, evacuate immediately.
- Make sure the community knows what to do for the different alert levels
  - ▶ Blue alert: flood may happen within 24-48 hours (WARNING PHASE)
  - ▶ Yellow alert: Flood likely in 12+ hours (TAKE ACTION PHASE)
  - ▶ Red Alert: Flood will happen in 3 -12 hours (MOVE AND STAY IN SAFE PLACE)

### 3. FLOOD: PREPARE TO RESPOND: Developing skills

#### Key message

#### Context-specific details

**3.3. Keep supplies to protect your home and people.**

- If you live in a flood prone area, keep appropriate tools to protect your home.
- Keep ladder and rope for escaping to the roof

**3.4. Bring your pets and service animal indoors**

- Maintain control of your animals and take them with you if you evacuate.

**3.5. When you hear a flood warning, store extra water**

- Fill plastic bottles with clean water for drinking.
- Fill bathtubs, empty drums and sinks with water for all other cleaning and sanitation needs

**3.6. During rainy season and flood conditions, keep your vehicle fuel tank filled**

- If you have a vehicle, keep its fuel tank filled in case you need to evacuate.

**3.7. During a flood “ Stay out of floodwater and evacuate immediately.**

- Do not allow children to play in the rain and on flood raising waters or drains.
- Watch the water level, don't wait to be stuck to evacuate to a safe place. Never swim in flood water and stay away from flooding rivers

**3.8. 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.
- Use extreme caution when travelling in wet, slippery and flood areas. Avoid travelling at night.
- Move to higher ground, away from rivers, streams, creeks and storm drains.
- Beware of water –covered roads and bridges. Do not attempt to cross rivers and large streams of unknown depth. If your vehicle is being submerged, open the windows to escape.

### 3. FLOOD: PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

#### 3.9. After a flood, take care around floodwaters

- Stay away from low-lying areas.
- Do not drink from, play or swim in water left by floods.
- Watch out for poisonous snakes – especially around trees and bushes. Use a stick to poke through debris.
- Avoid touching electrical that is wet or any water that is in contact with electrical wires.

#### 3.10. After a flood, start clearing out and drying your home when rain stops and water recedes

- 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.

#### 3.11. After a flood, take sanitation precautions

- Repair sanitation systems as soon as possible.
- Check drinking wells for contamination before using the water.
- Wash hands before eating, drinking or smoking.
- Visit nearest clinic for cuts and bruises.
- Keep children away during the clean-up.

#### 3.12. After a flood, clean up carefully

Follow these instructions for cleaning specific items:

Clothing and linens:

- Shake out mud, hose off dirt and wash items in a washing machine with hot water and washing detergent..

Furniture and appliances:

- Use hot water to wash pots, pans, dishes and utensils.
- Regular expose of furniture to sunlight

Do not force open wooden drawers and doors: let them dry first.



# Pandemics

A pandemic is an epidemic of infectious disease that spreads through human populations across a large region, multiple continents or even worldwide. Pandemics are caused by diseases that are able to infect humans and can spread quite easily. Pandemics become disasters when they are associated with enormous numbers of deaths, as well as illness.

Pandemics are caused by contamination hazards. Examples are:

- airborne (such as flu, tuberculosis, smallpox, measles, AFR/Respiratory infection)
- conveyed by body fluids (such as polio or HIV & STI)
- water borne (cholera, e. coli, dysentery, diarrhoea, conjunctivitis)
- food borne (such as salmonella, e. coli, listeria, hepatitis)
- soil borne (such as anthrax)
- vector borne (transmitted from animals to humans (such as the, malaria, dengue, zika or letospira).

In the past, pandemics have included cholera, s, leprosy, measles, polio and yellow fever.

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

- public practice of good hygiene and sanitation
- access to clean water
- hand washing
- vaccination
- proactive surveillance
- vector control.

NCD are on the rise including diabetes, stroke and cancer.

## 1. PANDEMIC: ASSESS & PLAN

### Key message

### Context-specific details

#### 1.1. Vaccinate children against killer diseases

- Maintain vaccination cards for babies and children and keep vaccination up to date for vaccination schedule. Participate in vaccination campaigns
- Vaccinate against polio, and measles.
- Do not re-use needles.

#### 1.2. Identify pandemic threats

- Think about your household as well as your neighbourhood and community

## 2. PANDEMIC: MITIGATE RISKS: Physical or environmental

### Key message

### Context-specific details

#### 2.1. Use clean and protected water sources

- 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.

#### 2.2. Keep water clean

- Protect water from contamination.
- 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.
- Build proper drainage around water source

#### 2.3. Purify water

- Learn and practise reliable methods for purifying water for your household.

#### 2.4. Wash hands very well with soap

- Learn how to wash your hands very well, using clean water and soap.
- Always wash your hands after using the toilet, and before and after handling food and eating, using the six hand washings steps.
- Wash & Soap Hands
  1. In between fingers
  2. Back of hands
  3. Thumbs
  4. Palms
  5. Nails
  6. Wrist
- Rinse and dry or shake to dry

## 2. PANDEMIC: MITIGATE RISKS: Physical or environmental

Key message

Context-specific details

### 2.5. Practise good sanitation

- Use proper toilet for defecation
- Practise good waste management
- Bury any waste that attracts flies & insects
- Dispose of waste properly without contaminating water or soil

### 2.6. Keep food clean

- Keep food safe for eating.
- Keep separated cooked and uncooked meat
- Cook meat thoroughly
- Cover food to prevent flies and insects contamination.
- Eat cooked food while still warm
- Wash and clean fruit before consumption
- Cooking utensils should be washed and clean

### 2.7. Practice good health

- Avoid spitting in public spaces, including bettelenut. Cover you spit with the ground. If toilets are not available, defecate 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) and keep them clean.

## 3. FOR AIRBORNE DISEASES

Key message

Context-specific details

### 3.1. Wash your hands very well

- Wash your hands very well using clean water and soap. This is of critical importance before and after you have contact with people who are sick.

### 3.2. Cover your mouth

- Always cover your mouth when you cough and sneeze. Cough or sneeze into your elbow or into a scarf, tissue or handkerchief. If you cough or sneeze into your hands, wash them immediately with soap and water.



### 3. FOR AIRBORNE DISEASES

#### Key message

#### Context-specific details

#### 3.3. Keep your distance

- When there are contagious diseases going around, and avoid crowding. .

#### 3.4. Dispose of your waste

- Dispose of your waste properly
- Throw out used masks and tissues properly by placing them in a bag and sealing it, before burning or burying them.

#### 3.5. Use good ventilation

- Avoid over crowding
- Ensure good ventilation with open windows and doors

#### 3.6. Separate and care for your sick

- In order to limit the spread of the illness within the household:
- 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.
- Seek medical attention if you are sick

### 4. FOR BODY-FLUID BORNE DISEASES:

#### Key message

#### Context-specific details

#### 4.1. Wash your hands very well

- Wash your hands very well using clean water and soap.
- Washing your hands is of critical importance before and after you have contact with people who are sick.

#### 4.2. Practise safe sex – ABC method

- Do not engage in unprotected sexual activity. Make the right choice use a condom.
  - ▶ A – Abstinence
  - ▶ B- Be faithful
  - ▶ C – Use a condom
- Do not introduce other people's body fluids into your body
- Avoid contact with blood
- Do not introduce other people's body fluids into your mouth.

## 5. FOR VECTOR (ANIMAL) BORNE DISEASES:

### Key message

### Context-specific details

#### 5.1. Be careful handling and slaughtering animals

- Never touch sick or dead animals without protection.

#### 5.2. Sleep under mosquito netting

- Sleep under mosquito netting to reduce exposure to vector borne disease (malaria, dengue and zika).

## 6. PANDEMIC: PREPARE TO RESPOND: Developing skills

### Key message

### Context-specific details

#### 6.1. Use personal protection equipment

- Personal protection equipment includes:
  - ▶ masks
  - ▶ protective glasses or goggles
  - ▶ gloves
  - ▶ apron
  - ▶ Soap or disinfectant in alcohol base, for washing hands.

#### 6.2. Take care of yourself

- Maintain good personal hygiene.
- Build up your immunity with a good diet, regular exercise and adequate rest.
- Reduce stress and avoid smoking.
- Wear an appropriate face-mask when you need to be in close proximity to someone who is ill or may be contagious.
- If you have contagious symptoms, stay at home.

#### 6.3. Manage fever

- Cool the body down with wet cloth and drink lots of fluids.

#### 6.4. Prepare oral rehydration solution to treat dehydration and diarrhoea

- Oral rehydration solution consists of: 1 litre water, 8 level teaspoons sugar, and 5 level teaspoons salt.

## 6. PANDEMIC: PREPARE TO RESPOND: Developing skills

### Key message

### Context-specific details

#### 6.5. Breastfeed

- Breastfeed babies rather than bottle feeding them
- Continue breastfeeding baby up to 2yrs or more
- 0-6 months exclusive breastfeeding

#### 6.6. Use latrines

- Use proper and clean toilets for to prevent illness and disease.

#### 6.7. Bathe regularly

- Bathe often, using clean water and soap or clean sand.
- Always practice personal hygiene

#### 6.8. Share your knowledge with others

- Teach others how to take care of themselves and maintain healthy practices. This will help to avoid the spread of diseases and epidemics.

#### 6.9. 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.

#### 6.10. Stockpile essential foods

- Consider which of the following three levels of food security or insecurity 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.



# Tropical cyclones

Tropical cyclones are relatively slow-moving storms with fast clockwise moving winds of at least 34 knots (120–320 km per hour in the center). Will have an ‘eye’: a central calm area. Maximum power is close to the ‘wall’, or outer edge, of the eye.

Each type is associated with a particular season that can last as long as seven months each year. Solomon Islands cyclone season is between Nov to April. Cyclones result in violent winds and heavy rainfall it can cause death, injury and destruction.

See also Key Messages for Floods

## 1. TROPICAL CYCLONE: ASSESS & PLAN

### Key message

### Context-specific details

#### 1.1. Know your area’s risks related to cyclone, hurricane or typhoon

Learn about the risks and potential impacts of severe tropical storms that can impact your location (especially winds, storm surge and flooding).

#### 1.2. Make an evacuation plan: know your shelter destination, evacuation route and transportation method

- If evacuation is necessary, work with your network to determine various transportation options.
- If you do not know the different options, ask your provincial disaster officer, village chief or village disaster committee about plans for people without private vehicles, or for anyone requiring assistance.

Make sure everyone in your household knows where to go if they have to leave the area.

#### 1.3. Work with your community to identify local cyclone shelters

- Work with your community to identify safe shelter locations for anyone who will need them.
- Make sure each household member knows the location and route to the agreed shelter.

#### 1.4. Work with your community or strategic placement of water and food

- Strategically place drinkable water, food, cooking equipment, and blankets in safe and accessible locations. This can save lives.

## 2. CYCLONE: MITIGATE RISKS: Physical or environmental

### Key message

### Context-specific details

#### 2.1. Build and maintain your home with severe tropical storms in mind

- Build a strong house structure – shutters or windows and doors. Strengthen the roof and leaves and fix weaknesses
- Clear your property of loose materials

#### 2.2. Inspect and repair your roof annually

- Inspect your roof at the beginning of the storm season and make repairs.
- Clear rain gutters and downspouts, and fix any that are loose.( For those with roofing irons)

#### 2.3. Trim or cut tree branches close to your house

- Where necessary, remove branches and small trees that may fall on the house. Remove or prune older trees, damaged branches and ornamental trees not suited to surviving strong winds. (In some cases, removing some branches allows wind to blow through large trees rather than toppling them).

## 3. CYCLONE: PREPARE TO RESPOND: Developing skills

### Key message

### Context-specific details

#### 3.1. Practise your evacuation routes

- Make sure household members know where to evacuate to, what route to take, and where to meet each other, if they have to leave.

#### 3.2. Stay informed

- Monitor the weather closely and listen to weather updates through media outlets and SMS
- Evacuate immediately to a safe place when advised
- Make sure the community knows what to do for the different alert levels
  - ▶ Blue alert: cyclone may happen within 24-48 hours (Alert + Warning Phase)
  - ▶ Yellow alert: cyclone likely in 12+ hours(Take action)
  - ▶ Red alert: Cyclone will happen in 3-12 hours(Move or Stay in safe place)

### 3. CYCLONE: PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

#### 3.3. Keep supplies to protect your home

- Keep appropriate tools and materials on hand to protect your home

#### 3.4. Keep vehicle fuel tanks filled

- During the storm season, refill vehicle fuel tanks before they are half empty, in case you need to evacuate.

If you receive a cyclone, watch

#### 3.5. Prepare your property for high winds and surge waters

- When you get a cyclone, watch, you need to:
  - ▶ clear your property of loose materials remove any debris or loose items, and bring indoors anything that can become a flying object
  - ▶ Close windows or fix wood or other protective materials outside to protect windows from wind

#### 3.6. Attend to utilities

- Turn off electricity, gas supply and water, if you are told to do so.
- Disconnect any small appliances.

#### 3.7. Prepare to evacuate

- Check that your evacuation supplies and your 'go bags' are ready, including water and high-energy food, emergency contact information. Wear rain boots if possible. Charge mobile phone batteries.

#### 3.8. Know when and where to evacuate

- You need to evacuate if you live on the coast, on a flood plain, near a river or on an inland waterway.
- If you live in a temporary or lightweight structure, evacuate early.
- Evacuate if you are directed to do so by local authorities or if you feel you may be in danger but do not evacuate during the storm.
- Evacuate to designated shelters based on prior planning.

### 3. CYCLONE: PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

**3.9. If you are not to advise evacuate, remain indoors in a safe and strong house**

- Stay away from windows
- Be aware that the 'eye of the storm' is deceptively calm and quiet. The storm is not over.

**3.10. 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.

**3.11. 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.



# Wildfires

Like all fires, a wildfire (also known as a forest fire or bushfire) requires three ingredients: oxygen, heat and fuel. A wildfire is a large, uncontrolled and potentially destructive fire that spreads quickly and may change direction or jump across gaps. Wildfires can affect rural and urban areas, and can start in just seconds, sparked by a range of natural causes (for example, lightning) or human carelessness (such as a discarded cigarette or garden fire). The spread of wildfires depends on the landscape, the fuel available, and the weather. Dry vegetation and abundant or uncleared dead wood are an enormous source of deadly fuel. A small fire can become a rapidly spreading fire in a matter of minutes – particularly in windy conditions.

The impacts include death, injury and property damage, loss of shelter and livelihood, disruption of lifeline infrastructure and destruction of community. They may also result in adverse environmental consequences, such as loss of wild habitats, threats to biodiversity, land degradation and increased risk of erosion

## 1. WILDFIRE: ASSESS & PLAN

### Key message

### Context-specific details

#### 1.1. Regularly inspect your home and property for fire hazards

- Inspect for local hazards, such as exposed firewood, leaf and rubbish and dead and overhanging branches.
- Check rain gutters & roof to clear out rubbish and leaves.
- Check that flammable substances (including fertilizers and pesticides) are safely stored.
- Check that all doorways and exit routes are clear.
- Remove all dead wood and dense vegetation

#### 1.2. Report fire hazard

- Immediately call fire service on 999 (if in Honiara)



## 2. WILDFIRE: MITIGATE RISKS: Physical or environmental

### Key message

### Context-specific details

#### 2.1. Prevent wildfires

- Never discard cigarette butts on the ground.
- Never leave an outside fire unattended.
- Always ensure that rubbish and garden fire are completely extinguished..
- Clear outdoor areas of broken glass which can reflect sunlight and start a fire.
- Dispose of glass bottles in rubbish bins.
- Ensure that gas bottle/mosquito oil are put off after cooking/ use.
- Put off candles and hurricanes lights after use

#### 2.2. Select a safe location for your building

- Ensure that there is enough distance between buildings, at least 3.5m or more.

#### 2.3. Design, build and maintain your structures with wildfires in mind

- Install electrical lines underground if possible.
- Install and maintain a lightning rod.
- Provide at least two ground-level doors, for easy and safe exit, and two means of escape from each room (doors or windows).

#### 2.4. Clear flammable materials away from your property

- Remove all dead wood and dense vegetation within at least 7m around your home.

#### 2.5. Maintain water sources for fire fighting

- Maintain water system.
- Identify and maintain outside water sources such as ponds, cisterns, wells, swimming pools and hydrants.
- Keep hoses long enough to reach any part of any buildings.

#### 2.6. Take precautions with flammable materials

- Avoid open burning, especially during fire season.

### 3. WILDFIRE: PREPARE TO RESPOND: Developing skills

Key message

Context-specific details

#### 3.1. Monitor conditions, stay informed, listen to the radio and follow instructions

- Listen to local radio, SMS and television regularly for updated information and instructions.
- Stay in touch with neighbours if possible.

#### 3.2. Respond to early warnings

- Stay alert for emergency warnings and respond to them immediately.
- Know the alarm system that will be used, and practise your response. (this can include con shell, drum or bell)
- If you are advised to evacuate, leave immediately.
- If you are not trained and equipped to fight a wildfire, don't risk your life Inform someone where you will be going

#### 3.3. If you are trapped by fire, crouch in a pond, river or pool

- If there is no body of water nearby, look for shelter in a cleared area among a bed of rocks. Lie flat, face down and cover you body with soil. Breathe air close to the ground.
- You cannot outrun a fire.

#### 3.4. After a wildfire be aware of hazards

- Look out for smouldering hot spots or items, and be alert to the possibility of re-ignition.
- Beware of hazards such as burnt trees and power poles or fallen wires and ash pits.
- Seek permission before re-entering the area.
- Check for damage and stay out of damaged buildings.

#### 3.5. After a wildfire, take precautions while cleaning your property

- Minimize health risks from hazardous materials such as toxic fumes from substances in garden sheds or garages, burnt asbestos and fine dust particles. Hold a damp cloth over your face to minimize and filter air-borne particles.
- Keep children away from clean-up sites.
- Wear shoes and rubber gloves when cleaning.
- Check for assistance when cleaning up and disposing of hazardous materials.



# Landslide

A landslide refers to Soil, rocks, and debris that move suddenly or slowly down a slope. . The action of gravity is the primary driving force though other contributing factors are rainfall, earthquakes, volcanic eruptions, groundwater pressure, and erosion, destabilization of slopes through deforestation, cultivation and construction.

Landslide can cause loss of lives and property.

## 1. LANDSLIDE: Assessment and Planning

### Key message

### Context-specific details

#### 1.1. Learn about local history of landslides

Landslide can re-occur in a same place

#### 1.2. Learn and be alert to early warning signs in the natural environment

- Familiarize yourself with the land around you.
- Be aware of areas more prone to landslides
  - ▶ On existing old landslides.
  - ▶ On or at the base of slopes.
  - ▶ developed hillsides
- Be aware of areas less prone to landslides
  - ▶ On hard, bedrock that has not moved in the past.
  - ▶ On flat-lying areas away from sudden changes in slope angle.
  - ▶ set back from the tops of slopes.
- Regularly inspect and observe changes in your natural landscape (your property and surroundings) and watch for signs of slope movement
  - ▶ places where runoff water comes together
  - ▶ 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 muddy
  - ▶ sudden decrease in creek water levels
  - ▶ muddy waters

# 1. LANDSLIDE: Assessment and Planning

Key message

Context-specific details



- ▶ bulging ground appears at the base of a slope
- ▶ water breaks through the ground surface in new locations cracked snow, ice or rock
- ▶ blockages and water build-up behind retaining walls.



## 1.3. Stay informed about weather

- Monitor the amount of rain during intense storms.
- Be aware of heavy rainfall More than 7 to 8cm of rain per day, or 1cm inch per hour, may trigger mudslides.
- In mountainous areas, stay away from rivers and gorges during rain
- Short bursts of heavy rain may be dangerous, after longer periods of wet weather.
- Alert your community and prepare your family to leave



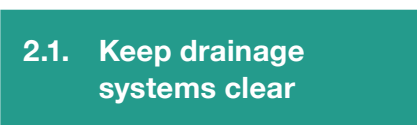
## 1.4 Community Awareness

- Spread the landslide danger information among the community.

# 2. LANDSLIDE: Physical or environmental mitigation

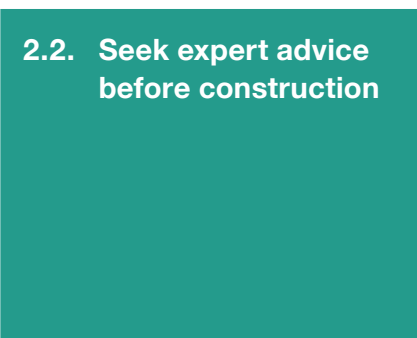
Key message

Context-specific details



## 2.1. Keep drainage systems clear

- Keep drainage systems free of dirt, leaves, and debris.
- Dig drains to channel water



## 2.2. Seek expert advice before construction

- Do not build in landslide prone areas.
- If you are planning on building and believe the site may be affected by landslide, seek advice from community chiefs and leaders, a soil engineer or engineering geologist.
- Get a ground assessment of your property
- Know the landslide history of your community and plan where to construct your house

## 2. LANDSLIDE: Physical or environmental mitigation

Key message

Context-specific details

### 2.3. Select construction site carefully

- Know the landslide history of your community and carefully plan where to construct house
- Avoid building on unstable soil

### 2.4. Protect your property

- Plant ground cover on slopes
- Build retaining walls
- Build channels or deflection walls to direct flow around buildings (but don't cause problems for others)

## 3. LANDSLIDE: RESPONSE CAPACITY - Developing skills

Key message

Context-specific details

### 3.1. Stay awake and informed during heavy rainfall

- Monitor rainfall
- Listen to radio or check online for warnings of heavy rainfall
- Evacuate to a safer place before landslide
- If you suspect imminent danger:
  - Get out.
  - Inform your neighbours.
  - Contact local officials.

### 3.2. DURING A LANDSLIDE: Listen and be alert to signs of imminent threat

- Be alert to unusual sights and sounds
- Be aware that strong earthquakes can induce landslides.
- Be especially alert while driving. Watch for collapsed pavement, mud, fallen rocks.

### 3.3. DURING A LANDSLIDE:

- Quickly move away from the landslide or mudflow

### 3. LANDSLIDE: RESPONSE CAPACITY - Developing skills

Key message

Context-specific details

#### 3.4. DURING A LANDSLIDE: If you cannot evacuate protect yourself in place

- If you are inside:
  - ▶ If escape is not possible 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
- If you are driving
  - ▶ Do not cross flooding streams: Turn around, don't drown.
  - ▶ Avoid river valleys and low-lying areas.
  - ▶ If you are arriving into a flooded area, turn around and take another direction
- If your car stops, leave it and get immediately to the highest spot you can find.

#### 3.5. 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.
- Check your home's foundation, chimney, and surrounding land for damage.

#### 3.6. AFTER A LANDSLIDE:

- replant damaged ground to prevent further erosion
- Seek expert help for reducing risks



# Tsunami

Tsunami: A tsunami is a series of huge waves carrying a massive volume of water that can flood and inundate land for hours. These can be caused by an underwater earthquake (> 6.magnitude), volcanic eruption, sub-marine landslide, or more rarely a meteorite.

The first wave may not be the largest. A small tsunami at one point can be extremely large a few kilometers away. 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 and cannot be surfed. Tsunamis monitoring and early warning

There are three types of tsunami - depending on the distance between where it is generated and where it is encountered.

- Local tsunami are generated close by. Their destructive effects are confined to within 100km or 1-hour travel time from source. There is often no time for official warning. Usually a strong earthquake is the natural warning sign for a local tsunami.
- Distant tsunami is generated between one and three hours travel time away from their destination. There may or may not be time for dissemination of early warning messages. A moderate or weak earthquake lasting 30-40 seconds or more may be the only warning.
- Far-field tsunamis are generated from a long distance away. Two or more hours of advance warning can be issued by tsunami monitoring centers. Although virtually undetectable until they break, tsunami early warning centers will issue a watch or warning immediately after a strong earthquake occurs. A watch is issued if the arrival time for tsunami is more than 2 hours away, allowing time to verify whether or not a tsunami has been generated. A warning is issued if the potential tsunami would arrive within 2 hours of the warning. Government agencies monitor and disseminate these messages to the public.

## 1. TSUNAMI: Assessment and Planning

Key message

Context-specific details

### 1.1 Learn about local risks of tsunami, storm surge,

- Find out if your locations are at risk from tsunami and coastal inundation.
- Learn about the history of tsunami, coastal inundation

# 1. TSUNAMI: Assessment and Planning

## Key message

## Context-specific details

### 1.2 Make your tsunami evacuation plans

- Identify safe and higher ground ( above sea level or 3km/2m inland) and the routes to get there.
- Know the tsunami 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.

### 1.3 Learn and be ready to act on natural warning signs tsunami risks

- Natural warning signs are:
  - ▶ Very strong earthquake shaking that lasts for 20 seconds or more signifies high local tsunami risk in very short term (no other warning)
- Signs of Tsunami are:
  - ▶ An unusual change in sea level
  - ▶ A roaring noise

### 1.4 Learn and be ready to act on distant tsunami watch or warning

- Make plans for people with special needs
- If time permits protect your livestock and secured unanchored projects

### 1.5 Work with schools to develop tsunami evacuation plan

- Plan and learn school evacuation routes if in an tsunami risk areas.
- Provide contact to obtain official "all clear" message from NDMO
- Make plans for safe family reunification after "all clear" is given.

### 1.6. Community awareness

- Spread the tsunami danger information among the community. Everybody must be aware of what to do in case of tsunami

### 1.7. Keep an emergency kit at home for your family for tsunami

- The kit has to contain:
  - ▶ Preserved food
  - ▶ Drinking water
  - ▶ Radio
  - ▶ Matches
  - ▶ Torch lamp
  - ▶ Batteries
- Use the kit only in case of emergency and replace items each year



## 2. TSUNAMI: Physical or environmental mitigation

Key message

Context-specific details

### 2.1. House protection

- Do not build your house too close to the sea

### 2.2. Protect your property and livestock

- Mitigate potential coastal inundation hazards and identify access for animals to move to higher ground

### 1.3 Prepare evacuation routes and safe havens

- Identify safe place and prepare safe routes for getting there.
- Make sure that your community has
  - ▶ Village disaster risk committee
  - ▶ Village Plan to prepare the community in case of Coastal Storm Surge or Tsunami
  - ▶ Test the preparation of your community with a drill

## 3. TSUNAMI: RESPONSE CAPACITY - Developing response skills

Key message

Context-specific details

### 3.1 Drop, cover, hold, and count

- If you feel strong earthquakes RUN to a safe place. Do NOT WAIT to be told. Do NOT WAIT until you see the wave

### 3.2 Respond to natural tsunami warning signals and evacuate quickly to higher ground or as far inland as possible

- Evacuate immediately in response to natural signs/local tsunami
- Evacuate to safe and higher ground
- Do not try to reunite until you reach safe place, or after "all clear" message.

### 3. TSUNAMI: RESPONSE CAPACITY - Developing response skills

#### Key message

#### Context-specific details

#### 3.3 Follow instructions for distant tsunami watch or warning

- Coastal storm surge: Monitor weather conditions and listen to radio weather reports
- DISTANT TSUNAMI
  - ▶ Blue alert: coastal storm surge may happen within 24-48 hours (WARNING)
  - ▶ Yellow alert: Coastal Storm Surge likely in 12+ hours (TAKE ACTION)
  - ▶ Red Alert: Coastal Storm Surge will happen in 3-12 hours (STAY/MOVE TO SAFE PLACE)
- LOCAL Tsunami Alert:
  - ▶ Yellow alert: tsunami likely in 3+ hours(WARNING)
  - ▶ Red Alert: Tsunami will happen inside 3 hours (MOVE TO SAFE PLACE)
- Listen to media outlets for warnings and updates for tsunami's generated by distant earthquakes. Respond to evacuation instructions immediately.

#### 3.4 Practice tsunami evacuation drills (Planning)

- Practice community-wide tsunami evacuation drills from work, school and home, following evacuation routes to safe haven, and waiting for "all clear" signal.

#### 3.5 Protect livestock and pets

##### BEFORE

- Consider evacuation of your animals to higher ground.

##### AFTER

- Keep animals under direct control
- Pets and livestock may become disoriented and their behaviour may change.
- Protect animals from secondary hazards.
- Ensure animals are secure and have food and water.

#### 3.6 Stay away from coast, rivers and streams and water ways

- Watch out the water level and if necessary move to a safer place on higher ground or inland

### 3. TSUNAMI: RESPONSE CAPACITY - Developing response skills

#### Key message

#### Context-specific details

#### 3.7 If you are out at sea, stay there

- Small Boats and ships 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 mariner and port reports before returning to port.

#### 3.8. 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.
- Listen to media outlets for all clear message from NDMO

#### 3.9 Be aware of and minimize secondary hazards

- Beware of secondary hazards such as contaminated water, damaged roads, landslides, mudflows, and other hazards.
- Minimize risks of fire, electrical and hazardous materials release
  - ▶ turn of gas in case of leaks
  - ▶ turn off electricity in case of inundation or damage
- Avoid use of contaminated water
- Stay out of buildings if there is water around it. They may sink or collapse.
- Avoid tsunami impacted areas and debris in the water.
- Expect aftershocks which could possibly generate another tsunami



# Volcano

Volcanic eruption occurs when magma from inside the earth rises to the surface. An eruption can destruct houses and kill people. Volcanoes pose several hazards: volcanic ash, gases, lahars, landslides, lava flows, and pyroclastic flows and some volcanoes are beneath the sea

**Ash fall:** Ash fall that spreads over broad areas after eruption. It consists of fine particles of fragmented volcanic rock and glass. Ash is hard, abrasive, mildly corrosive, conducts electricity when wet, and does not dissolve in water. It can cause thunder and lightning. Freshly fallen ash can irritate eyes and lungs, may pollute local water supplies and damage vegetation. Ash fall can contaminate water or clog supply equipment. It can reduce visibility, and make roads very slippery and impassable. Over time the ash is incorporated into fertile topsoil in volcanic regions.

**Tephra:** Fragments of volcanic rock and lava (<2mm to >1m diameter) blasted into the air during an eruption.

**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 tsunamis.

**Lava flows:** Lava flows are streams of magma (molten rock) that pour or ooze from an erupting vent. They may extend up to about 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.

**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. 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. VOLCANO: Assessment and Planning

### Key message

#### 1.1 Learn your volcano risks and warning signs

### Context-specific details

- Report unusual physical changes
  - ▶ Rumbling sounds
  - ▶ Dry plants
  - ▶ Earthquakes
  - ▶ Landslides
  - ▶ Other major changes
  - ▶ Become familiar with volcano hazard map and danger zones.

# 1. VOLCANO: Assessment and Planning

Key message

Context-specific details

## 1.2. Community Awareness

- Spread the Volcano danger information among the community. Everybody must be aware of what to do in case of volcanic eruption

## 1.3 Develop plans for evacuation and shelter-in-place

- Develop an evacuation plan for volcanic eruptions and make sure all members of your household know and practice it.
- Make sure you know the community response plan
- Test the preparation of your community with a drill exercise.

## 1.4 Be aware of secondary hazards associated with volcanic eruption

- Volcanoes can lead to earthquakes, flash floods, landslides, mudflows, thunderstorms, tsunamis.
- Mudflow danger increases near stream channels and with prolonged heavy rains. Do not cross in front of a mudflow. Inform others of the danger.

# 2. VOLCANO: Physical or environmental mitigation

Key message

Context-specific details

## 2.1. Protect yourself, especially your lungs and eyes from ash fall

- Stay indoors and away from volcanic ash fall areas if possible, If outside, seek shelter (e.g. in a building or vehicle)
- Wear goggles or diving glass to protect your eyes.
- Wear mask to protect against lung irritation use a (damp) handkerchief or cloth over your nose and mouth.
- Reduce ash in house by closing all windows, doors and other vents and close fans and air conditioners).
- Protect your skin.
  - ▶ Wear long sleeves and long pants.
- Avoid low-lying areas downwind of volcano

## 2.2. Limit driving

- If in a vehicle, keep doors and windows closed.
- Drive slowly with large distance between vehicles to avoid stirring up ashes.

### 3. VOLCANO: RESPONSE CAPACITY - Developing skills

#### Key message

#### Context-specific details

#### 3.1 Follow instructions to evacuate or take shelter

- Listen to and follow instruction from government and radio. Pay attention to warning including evacuation notice
- Stay together.

#### 3.2. Protect your lungs and eyes during clean-up

- Wear protective clothes over head and body
- Breath through a lava lava

#### 3.3. Clean up, and dispose of ash fall carefully, outside

- Dampen but do not soak ash. Remove using shovels and stick brooms. Do not spread the ash indoors. Do not damp ash in gutters, gardens, or roads. Do not contaminate water supply. Keep ash separate from Normal rubbish Follow official instructions for disposal of rubbish. Avoid rubbing Wash and beat textile outside Unplug electronic equipment and vacuum clean with a cleaner
- Clean stoves, fans, vents and refrigerators and replace filters

#### 3.4. Clean up your vehicle

- Clean the vehicle, including the engine, radiator, and other essential parts, using water to flush the ash.

#### 3.5. Protect vulnerable people from dust exposure

- Keep children indoors.
- Do not permit play in ash pile.
- Discourage play in dusty settings and strenuous activity.
- Organize child-friendly spaces to free parents for clean-up tasks.
- Those with chronic bronchitis, emphysema or asthma especially should stay inside and avoid unnecessary exposure to the ash

## 4. VOLCANO: RESPONSE CAPACITY - Storing provisions

Key message

Context-specific details

### 4.1 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
- Evacuation bag stored in your vehicle.
- Always carry a torch, even during the day.

### 4.2 Store clean water and food

- Collect and store clean water in closed containers, in advance.
- Store food in closed containers.
- If there is ash in water, let it settle and then use the clear water.
- Ash-covered vegetables are safe to eat after washing with clean water.



# Safety at sea

## 1. SAFETY AT SEA: Assessment and Planning

### Key message

### Context-specific details

#### 1.1. Let's prepare the community to travel by boat

- Make sure your boat is seaworthy
- Don't overload it
- Make sure the skipper is experienced

#### 1.2. Before you travel

- Inform someone where you are going, what time you are expecting to reach your destination and what time you will return
- Always listen to the weather forecast and cyclone warning before traveling by boat
- Do vital check
- Warning (priority)
- Weather (visibility thunder storms and swell conditions)
- Wind condition
- Wave condition
- Tidal times
- Contact 933 for more information

#### 1.3. Prepare a boat emergency kit

- Spare paddles
- Petrol
- Food, drinking water
- Engine tools (spark plugs...)
- Bucket
- Life jackets
- Fire flares
- Satellite phones



## 2. SAFETY AT SEA: Physical or environmental mitigation

Key message

Context-specific details

### 2.1. When accident occurs

- Each passenger must wear a life jacket
- If you sink, stay in one group

### 2.2. While travelling

- Do not take alcohol before and during traveling on a boat
- Cover your head to avoid sunstroke

## 3. SAFETY AT SEA: RESPONSE CAPACITY - Developing skills

Key message

Context-specific details

### 3.1. Skills to develop

- Learn to swim
- Learn to use floatation device
- Learn to use GPS/Campus



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