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Second edition – Updated and revised

Public awareness and public education for disaster risk reduction:

Action-oriented key messages for households and schools

Save the Children

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of Red Cross and Red Crescent Societies

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Foreword

Every year, shocks, disasters and hazards such as earthquakes, floods, pandemics and landslides, lead to thousands of avoidable deaths. Information shared at the right time, in an understandable format, by trusted sources, can be the most effective life-saving tool in such events. Indeed, knowledge is empowerment when it comes to preparing for, mitigating the impact and responding to shocks and hazards. Deciding on a family preparedness plan; pre-identifying evacuation routes in the building and neighbourhood; knowing to turn the electricity-box off in the event of flooding; remembering to check on older persons in a heat wave: these are the sorts of measures that can equip individuals and families to confidently take action and stay safe in the face of disasters.

In a changing climate, with increased risks of extreme weather and disasters, the public will need to have a greater awareness of the risks they face and what they can do to be prepared. The International Federation of Red Cross and Red Crescent Societies (IFRC) and Save the Children have a long history of helping communities build their resilience. Building on the success of the first edition of *Public awareness and public education for disaster risk reduction: key messages* published in 2013, this second edition Public Awareness and Public *Education for Disaster Risk Reduction: Action-oriented key messages for households and schools* continues this tradition, providing an updated tool that will support communities to build their knowledge-base and put in place their own measures to stay safe.

This updated publication provides practical advice and guidance on the nature of messages and information to share with the public, for use by all institutions with a responsibility for improving the safety of communities at risk and to mitigate the impact of shocks, hazards and disasters. Governments, non-governmental organizations, the United Nations and others can all use this guidance for national adaptation and to help prepare households. Active, consistent and clear messaging is vital to create a culture of safety and common understanding.

It contains revised messages that cover additional hazards, and more details on key issues to be considered for effective disaster preparedness, such as climate change, gender and inclusion. There is also greater guidance on child protection, school safety and community engagement. We see it as a significant contribution to our collective work to reduce disaster risks, and ultimately save lives.

Elhadj As Sy
Secretary General
IFRC

Helle Thorning-Schmidt
Chief Executive Officer
Save the Children

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Abbreviations

ARS	acute radiation syndrome
CBDM/ CBDRR	Community-based disaster management/community-based disaster risk reduction (sometimes preceded by 'I' for integrated)
CBRN	Chemical, Biological, Radiological and Nuclear hazards
CRED EM-DAT	Centre for Research on the Epidemiology of Disasters Emergency Events Database
CWAs	chemical warfare agents
GADRRRES	Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector
GDPC	IFRC Global Disaster Preparedness Centre
GFDRR	Global facility for Disaster Risk Reduction
HFA	Hyogo Framework for Action
IFRC	International Federation of Red Cross and Red Crescent Societies
IGO	International governmental organization
INGO	International non-governmental organization
IPCC	Intergovernmental Panel on Climate Change
KI	potassium iodide
LLIN	long lasting insecticide treated nets
MERS	Middle East respiratory syndrome
NOAA	National Oceanic and Atmospheric Administration
OECD	Organisation for Economic Co-operation and Development
SARS	severe acute respiratory syndrome
SOP	Standard Operating Procedures
SDG	Sustainable Development Goals
TICs	toxic industrial chemicals
UNISDR	United Nations Office for Disaster Risk Reduction
UNESCO	United Nations Educational, Scientific and Cultural Organization
USGS	United States Geological Survey
VCA	Vulnerability and capacity assessment
WHS	World Humanitarian Summit
WISS	Worldwide Initiative for Safe Schools
WMO	World Meteorological Organization

Glossary

Disaster: A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts that exceed the ability of the affected community or society to cope using its own resources.

Disaster risk reduction: The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, reduced vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Mitigation: The lessening or limitation of the adverse impacts of hazards and related disasters.

Preparedness: The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent or current hazard events or conditions.

Prevention: The outright avoidance of adverse impacts of hazards and related disasters.

Public awareness: The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken, individually and collectively, to reduce exposure and vulnerability to hazards.

Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, adapt to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Risk: The probability of an event and its negative consequences.

Vulnerability: The characteristics, circumstances and conditions determined by physical, social, economic and environmental factors or processes of a community, system or asset that make it susceptible to the damaging effects of a hazard.

Hazards

A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

The classification of hazards presented here is based on categories used globally by the main hazard-related databases.

Climatological hazards

Drought: A long-lasting event triggered by a lack of precipitation. A drought is an extended period of time characterized by a deficiency in a region's water supply that is the result of constantly below average precipitation. A drought can lead to losses in agriculture, affect inland navigation and hydropower plants, and cause a lack of drinking water and food. (Source: Centre for Research on the Epidemiology of Disasters (CRED) EM-DAT)

Extreme heat/heat wave: A period during which the daily maximum temperature exceeds for more than five consecutive days the maximum normal temperature by 9 degrees Fahrenheit, i.e. 5 degrees Celsius, the normal period being defined as 1961–1990. Because of global warming, the frequency, duration, and severity of heat waves are predicted to increase in most parts of the world. The impacts on human health, regional economies, and ecosystems may be significant. (Source: World Meteorological Organization (WMO))

Extreme cold/cold wave: Marked cooling of the air, or the invasion of very cold air, over a large area; it usually lasts from a few days to a few weeks. This is a drop of average temperature well above the averages of a region, with effects on human populations, crops, properties and services.

Biological hazards

Biological emergency: A biological emergency can occur when there is a major epidemic outbreak of diseases such as avian Influenza, severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) etc., plant or animal contagion, insect or other animal plagues and infestations.

Contamination can occur through natural exposure to the agent, accidental release of microorganisms from for example a research facility or by deliberate acts. (Source: International Federation of Red Cross and Red Crescent Societies (IFRC))

Major epidemic and potential pandemic diseases: This includes viral, bacterial, fungal and prion diseases, yellow fever, cholera, zika virus, ebola virus, malaria and all other epidemics, including all zoonotics-based and pandemic diseases.

Either an unusual increase in the number of cases of an infectious disease that already exists in the region or population concerned, or the appearance of an infection disease previously absent from a region. (Source: CRED EM-DAT)

Geophysical hazards

Earthquakes: A term used to describe both sudden slip on a fault, and the resulting ground shaking and radiated seismic energy caused by the slip, or by volcanic or magmatic activity, or other sudden stress changes in the earth. (Source: United States Geological Survey (USGS))

Landslide/debris flows: Movement of surface material down a slope. (Source: USGS)

Tsunami: A tsunami is a sea wave of local or distant origin that results from large-scale seafloor displacements associated with strong earthquakes, major submarine slides, or exploding volcanic islands. (Source: USGS)

Volcanic eruption: The discharge (aerially explosive) of fragmentary ejecta, lava and gases from a volcanic vent. (Source: USGS)

All volcanic activity like rock fall, ash fall, lava streams, gases etc. Volcanic activity describes both the transport of magma and/or gases to the earth's surface, which can be accompanied by tremors and eruptions, and the interaction of magma and water (e.g. groundwater, crater lakes) underneath the earth's surface, which can result in phreatic eruptions. Depending on the composition of the magma eruptions can be explosive and effusive and result in variations of rock fall, ash fall, lava streams, pyroclastic flows, emission of gases etc. (Source: CRED EM-DAT)

Meteorological hazards

Tropical cyclones: An atmospheric closed low pressure circulation system rotating counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere (includes: cyclone, extra-tropical cyclone, tropical cyclone, hurricane, typhoon). (Source: National Hurricane Centre, National Oceanic and Atmospheric Administration (NOAA))

Hydrological hazards

Floods: The overflowing of the normal confines of a stream or other body of water, or the accumulation of water over areas that are not normally submerged. This includes: river/fluvial floods. (Source: Intergovernmental Panel on Climate Change (IPCC))

Storm surge (specific hazard messages under tsunami and storm surge): The temporary increase, at a particular locality, in the height of the sea due to extreme meteorological conditions (low atmospheric pressure and/or strong winds). The storm surge is defined as being the excess above the level expected from the tidal variation alone at that time and place. (Source: IPCC)

Hailstorms: Hail is a form of solid rain consisting of balls or irregular lumps of ice, measuring between 5 millimetres and 15 centimetres in diameter. Hail formation requires strong, upward motion of air freezing temperatures at lower heights. Storms that produce hail that reaches the ground are known as hailstorms. Hailstorms normally last from a few minutes up to 15 minutes. Hail in the tropics occurs mainly at higher elevations. It may be accompanied by other severe weather events, such as cyclones and tornadoes.

Technological and man-made hazards	**Man-made hazards:** Hazards that are "induced entirely or predominantly by human activities and choices" (i.e. anthropogenic, or human-induced). This term does not include the occurrence or risk of armed conflicts and other situations of social instability or tension that are subject to international humanitarian law and national legislation. **Nuclear emergency:** Nuclear emergencies (includes nuclear hazards) involve or emerge from nuclear chain reactions. Such chain reactions take place under controlled circumstances for instance in nuclear power plants and research reactors. Nuclear chain reactions also occur in an uncontrolled manner in nuclear weapons, creating the enormous blast and heat effects associated with nuclear detonations. (Source: United Nations International Strategy for Disaster Reduction (UNISDR)/IFRC) **Radiological emergency:** Radiological emergencies (includes radiological hazards) can involve all other sources of radiation, such as radiography machines, radioactive material for use in industry, lost sources and more. Radiological accidents are usually not mass casualty events, as they commonly occur when people are irradiated by misplaced or misused radioactive equipment. They can however cause widespread fear among large parts of the population. (Source: UNISDR/IFRC) **Chemical emergency:** Chemical emergencies (includes chemical hazards) are defined as any unplanned event involving hazardous substances that causes or is liable to cause harm to health, the environment or property, such as loss of containment of hazardous substances and fires. (Source: Organisation for Economic Co-operation and Development (OECD))
Non-technological and man-made hazards	**Wildfires:** This includes all types of fire events, wildfires and forest fires. It is the process of combustion of inflammable materials producing heat, flames and (often) smoke. (Source: International Federation of Red Cross and Red Crescent Societies (IFRC))

Source: Definitions where sources are not indicated have been adapted from UNISDR's terminology of disaster risk reduction.

PART A

INTRODUCTION AND KEY FRAMEWORKS


WHEN THERE IS A
TSUNAMI WARNING,
RUN TO THE HIGHER GROUND
WHEN THERE IS AN
EARTHQUAKE, DR^D
Prisms and Prisms
Fractions

Introduction

This second edition of the *Public awareness and public education for disaster risk reduction: Action-oriented key messages for household and schools* provide messages for all types of hazards including 13 major hazards and family disaster preparedness. The first edition published in 2013 drew from widely disseminated, authoritative sources from across the globe and were developed through inter-agency consensus. In 2014, Save the Children joined the effort and co-supported research and global expert validation.

The revised key messages, in this second edition, are updated to cover additional hazards and have been reviewed for integration of climate change messages, messages regarding pets and livestock and child protection-specific guidance during crises and emergencies. Subject matter experts from partner organizations globally have researched and validated specific messaging for seven additional hazards.

This new edition is a revised, updated and enhanced tool, building on the first edition, for practitioners around the world. IFRC and Save the Children invites Red Cross and Red Crescent National Societies, national disaster management organizations, non-governmental organizations and inter-governmental organizations to be part of the continued global validation project, with the objective of adapting and adopting key messages at the national level. To that end, this document provides a well-researched template and starting point.

Next steps: The key messages validation project will continue following this new edition of messages, with the goal of developing an even fuller set of messages with a variety of contextualized versions, in several languages. National Societies and partners can continue to implement and test the promotion of hazard-specific messages through participatory, consensus-based adaptation and localization workshops.

If you would like to lead or participate in the adaptation and localization process in your country or region, please contact:

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For more background information, case studies, video material and related key messages please visit the dedicated public awareness and public education website on www.ifrc.org.

What are key messages, and why should they be consensus-based and harmonized?

Public awareness and public education key messages are evidence-based, concise, actionable information for hazard prevention. These harmonized messages are available as a tool for National Societies and partners to localize and adopt as necessary to scale up their work in promoting consistent and sustained safety and resilience related action to the public. If these actionable messages are universally practised, disaster risks can be substantially reduced at individual and household levels, and more lives can be saved.

For messages to have credibility and strong impact in communities, they need to be adapted to local hazards, culture and contexts. Creating an overall culture of safety and resilience requires unified messaging.

This document focuses on harmonizing key messages. This has meant working to ensure that the key points are conveyed consistently, even in instances when different stakeholders disseminate messages to different audiences.

By setting out this common reference source, it is hoped that practitioners will make voluntary efforts to harmonize their messages. The goal is common understanding and consistency in the application of common themes, worldwide.

Scope and structure of the messages

The framework used to develop the key messages is based on scientific analytical research.[1] This research highlights three logical and consistent spheres of activity that emerge from a wide mix of household hazard adjustment activities. These include:

- assessing risks and planning activities to recognize, reduce and respond to hazards
- taking mitigation measures to make the built and natural environments safer and establishing early warning systems
- developing response capacity, by learning skills and storing provisions.

Looking beyond household hazard adjustment to consider the wider range of disaster reduction activities suggested at micro and macro levels, these same spheres of activity apply.[2] Risk reduction outcomes require action in all three of these areas, and at every level of society.

The messages are structured in a way that helps people to think about the issues and to solve problems for themselves. The framework for the messages is linked to the activities that take place in society at large, so that action taken at home logically connects with advocacy for action through work, school, community and governance.

1 Kirschenbaum A. *Disaster preparedness: A conceptual and empirical reevaluation in International Journal of Mass Emergencies and Disasters, Vol. 20, No. 1*, pp. 5–28, 2002.
2 Burby J. R. *Unleashing the power of planning to create disaster-resistant communities' in Journal of American Planning Association, 1999*; 249–258. Petal M. *Urban Disaster Mitigation and Preparedness: The 1999 Kocaeli Earthquake*. Doctoral dissertation. Los Angeles: University of California, 2004.

Contextualization linked to action

Advocates and practitioners are often struck by the major differences between the advices given for urban versus rural areas, or between guidance for those with and without access to economic and social resources.

For this reason, it is important to consider each action and ask whether it needs to be adapted to the local context. For example, some of the key messages set out in this publication may not reflect valuable indigenous knowledge. Others may seem to conflict with cultural norms prevalent in a given region. Where this occurs, it is important to reflect carefully and use problem-solving skills to consider how to adapt the guidance to the given context, rather than rejecting the message completely.

Adapting key messages: example

The advice to keep a pair of hard-soled shoes by one's bedside in earthquake-prone areas stems from the evidence that following an earthquake during the night, the majority of avoidable injuries are to feet and legs, caused by walking on broken objects and debris. In the aftermath of an earthquake, removing a piece of glass from a foot requires medical resources that are scarce following a disaster and ideally should be used to treat serious injuries and for saving lives. By taking simple precautions, certain injuries can be avoided enabling the individual to provide help to others, rather than becoming a victim themselves.

Yet, in many cultures, shoes are not brought into the house and left by the door. In many places, it is presumptuous to assume that people have an extra pair of shoes to leave by the bed, or perhaps have any shoes at all. Nevertheless, knowing the consequences of not finding shoes by the bed, it would be best to work with end users of the guidance to determine how to adapt the advice in order for it to be culturally acceptable, and to prevent avoidable injuries.

To help with this process, for each set of messages, the left column indicates the core concept, which seeks to be as universal as possible. The right column presents operational details that may be context specific – the precise information needed to achieve the action.

Key messages	Context-specific details
Core concept	Operational details that may be context specific

Adapting and adopting key messages at national level

When it comes to consensus-based adaptation and localization, it is important to follow good practice. A broad participatory process, with expert input, will yield a set of messages that everyone feels able to accept and can promote jointly and consistently for some time to come. The steps below explain how to adapt and localize key messages. For further information, refer to Annex I.

Step-by-step guide for adapting and adopting key messages

Step 1: Meet with the national disaster risk management office to make a preliminary plan.

Step 2: Prepare the key messages for review – translate the messages into the local language where necessary and format in line with nationally disseminated key messages.

Step 3: Plan a two-day workshop, set an agenda, send invitations to the authorities that represent different sectors and areas of expertise and share the review package with the subject-matter experts.

Step 4: Prepare for the National key messages workshop.

Step 5: Conduct the National key messages workshop.

Step 6: Compile and edit inputs and circulate draft for final review.

Step 7: Finalize, publish and disseminate the key messages.

Step 8: Make use of the nationally adopted key messages for household risk reduction and to build resilience.

Step 9: Review the key messages periodically.

The public awareness and public education messages have been adapted and adopted by several countries including: Bhutan, China, Fiji, Lao People's Democratic Republic, Solomon Islands, Thailand, United States of America and Vanuatu. Examples of other harmonized messaging are provided in the box below.

Examples of harmonized messaging

There are several good examples of consensus-based harmonized messaging that involve key government departments, scientific and civil society partners, as well as Red Cross and Red Crescent National Societies, including:

- **Central Asia** – Red Crescent Societies have co-produced or co-logoed important public education materials along with Ministries of Emergencies, leading scientific and technical institutes, donors, and a host of other local and international non-governmental organizations.
- **Caribbean** – Seasonal public education for hurricane preparedness is presented jointly by Red Cross and their respective governments in the region.
- **Indonesia** – The wide-ranging Consortium for Disaster Education has collaborated with its broad stakeholder membership to present standardized programmes to schools and community groups, to share the work and make sure that everyone receives the same messages.

- **Central America** – Public education and vulnerability and capacity assessment guidance is consistently conveyed across the region through harmonized modules shared by National Societies, international governmental organizations and non-governmental organizations and certain government agencies.
- **South Asia** – A template for *standardized first aid kits* has incorporated inputs from National Societies as well as a wide range of governments, experts and field practitioners.
- **China** – Recognizing that in a large and diverse country there are many potential contributors to consensus-based messages, subject-matter experts in-country created a web-site to gather wider public input, and invited trusted and respected individuals in the field from all over the country to contribute to the messages. The first version was consolidated in late 2017.

Recent examples of public awareness materials that are in use at an international scale include community-based health and first aid modules that have been adopted or approved by health authorities as core materials for public education in health and first aid.

How are public awareness and public education key messages being used?

The public awareness and public education key messages as well as nationally adapted and adopted versions are being used in a number of ways.

Country specific messages

Afghanistan, Bhutan, China, Fiji, Lao People's Democratic Republic, Solomon Islands, Thailand, and Vanuatu, have already adapted and adopted the key messages. In these countries, the messages serve as the foundation for quality control of information and education and behaviour change education materials for safety and resilience.

Public awareness

The event Showcasing Innovation: Media and Communication for Disaster Risk Reduction was held during the Third UN World Conference on Disaster Risk Reduction in Sendai in March 2015. The event focused on how to use media or communication in a creative and effective manner to help communities at risk become more aware of disaster risks and contribute toward building their resilience. Examples of innovation, good practice on how to reduce disaster risks and improve resilience specifically targeted to people who are at risk of hazards were shared. Public awareness and public education key messages were acknowledged and recognized following the event. The British Broadcasting Corporation, Global Network of Civil Society Organisations for Disaster Reduction, Netherlands Red Cross and Plan International jointly organized the event.

In 2017, the International Federation of Red Cross and Red Crescent Societies (IFRC) together with Prudence Foundation and National Geographic launched the SAFE STEPS programme. The first of its kind, pan-Asia programme aims to promote awareness and increase knowledge on natural disasters across the region to spread and share life-saving information. The programme which was initially based on public awareness and public education key messages, aims to provide easy-to-understand educational messages on how to prepare for disasters to as many people as possible so they can be safer and more resilient.

Information and communication technology

One of the key means of increasing public awareness to strengthen community resilience is to use innovation and technology. Several applications have been developed with first aid and hazard-related information, putting preparedness information directly into people's hands. Examples include:

- Hazard App – using a Universal App Program, the Global Disaster Preparedness Center (GDPC) and the Global First Aid Reference Center have created a platform to facilitate the adaption and localization of mobile applications (apps).
- The Ready, Steady, Safe App – in Australia from Save the Children in cooperation with Australian Red Cross, supports child-centred family disaster preparedness.
- Tanah: The Tsunami and Earthquake Fighter is a disaster preparedness educational mobile gaming app designed for children and families. It was developed in collaboration between GDPC, UNESCO-Bangkok, and USAID with support from Indonesian Red Cross Society and Asian Coordinating Centre for Humanitarian Assistance on Disaster Management.
- What Now Service is founded on IFRC's public awareness and public education key messages for disaster risk reduction. Using GDPC's What Now Service any National Society can localize the messages for their area, upload them into the What Now Service, and have the alert messages link to their logo and website. This way, early warning capacity can be improved at scale for online-users in their community.

Public education and school safety

The Comprehensive School Safety Framework recommends the public awareness and public education key messages as starting point for development of formal and informal curriculum content. The messages serve as a foundation for development of formal curriculum as well as non-formal activities for disaster risk reduction education. This includes providing the underlying resource for the content of books, games, videos as well as learning activities. This global framework has been produced jointly by the Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES) and UNISDR.

Red Cross and Red Crescent National Societies school safety initiatives align with the Comprehensive School Safety Framework. For example, the Pillowcase Project teaches hazard awareness and preparedness lessons. National Societies in Australia, Hong Kong, Mexico, Peru, the United States of America, and the United Kingdom have adapted and are implementing this project.

Alignment and contributions to strategic frameworks

This second edition of the *Public awareness and public education for disaster risk reduction: key messages* contribute to the following global strategies, frameworks and initiatives:

IFRC Strategy 2020 (and beyond) voices the collective determination of IFRC to move forward in tackling the major challenges that confront humanity in the coming decades. Informed by the needs and vulnerabilities of the diverse communities with whom we work, as well as the basic rights and freedoms to which all are entitled, this strategy seeks to benefit all who look to Red Cross and Red Crescent to help to build a more humane, dignified, and peaceful world. The collective focus of the IFRC is on achieving the following strategic aims:

1. Save lives, protect livelihoods, and strengthen recovery from disasters and crises;
2. Enable healthy and safe living; and
3. Promote social inclusion and a culture of non-violence and peace

IFRC Framework for Community Resilience includes the recommendation of increasing communication and public information efforts. The Framework for Community Resilience has the goal of guiding and supporting the work of National Societies through the following three strategic objectives:

1. To assist communities as they adopt risk-informed, holistic approaches to address their underlying vulnerabilities;
2. To encourage communities to adopt demand-driven, people-centred approaches to community resilience strengthening; and
3. To be connected to communities – being available to everyone, everywhere to prevent and reduce human suffering.

The One Billion Coalition for Resilience focuses on building individual, household and community resilience through risk awareness. It aims to ensure that communities are able to make resilience-building choices that fit with local needs and can draw on local resources. It is designed to help communities and households build resilience across a wide range of areas, including: first aid and preparedness training, strengthening local institutions and early warning systems, pandemic preparedness and improving access to health and water and sanitation. The ultimate aim is to improve and save lives.

The Sendai Framework for Disaster Risk Reduction 2015–2030 emphasizes the importance to promote successful disaster risk communication actions. The framework was adopted at the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan on 18 March 2015. The main features of the framework are:

1. Shift in focus from managing disasters to managing risks;
2. Wider scope which includes risk of small- to large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or man-made hazards, as well as related environmental, technological and biological hazards and risks; and
3. More people-centred, all-hazards and multi-sectoral approach to disaster risk reduction.

Risk communication and education play an important role in the Sustainable Development Goals (SDG). Disaster risk reduction is an integral part of social and economic development, and is essential if development is to be sustainable for the future. A risk-informed and resilient post-2015 development agenda can only be achieved through partnering with local groups, communities and the private sector. In September 2015, at the United Nations Sustainable Development Summit, Member States formally adopted the 2030 Agenda for Sustainable Development in New York. The agenda contains 17 goals including a new global education goal (SDG 4). SDG 4 is to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'.

GADRRRES's Comprehensive School Safety Framework aims to ensure that all schools are safe from disaster risks and all learners live in safe environments. The purpose of GADRRRES is to strengthen global coordination, increase knowledge, and advocate on risk reduction education and safety in the education sector. Its work ultimately contributes to a global culture of safety and resilience through education and knowledge. GADRRRES is a multi-stakeholder mechanism that includes UN agencies (UNICEF, UNISDR, UNESCO, among others), international organizations (IFRC, the Global Facility for Disaster Reduction and Recovery), and global networks (Inter-Agency Network for Education in Emergencies, Save the Children, World Vision, Plan International).

The Worldwide Initiative for Safe Schools is a government-led global partnership that aims at securing political commitment and fostering safe schools' implementation globally. It motivates and supports governments to develop and implement national school safety policies, plans and programmes in combination with the three technical aspects of the Comprehensive School Safety Framework. IFRC and Save the Children contribute through their collaboration with the Ministry of Education and the provision of tools to reach the goals set out in the Comprehensive School Safety Framework.

World Humanitarian Summit (WHS) 2016 was convened to share knowledge and establish common best practices among organizations involved in humanitarian action in order to enable them to react more effectively to crises. One of the main themes of WHS was to reduce vulnerability and manage risk.

PART B

KEY MESSAGES FOR DISASTER RISK REDUCTION

PART B.1

KEY MESSAGES FOR ALL-HAZARDS HOUSEHOLD AND FAMILY DISASTER PREVENTION

This section sets out foundation messages that are considered common for all-hazards preparedness. Specific complementary messages related to different hazards like drought, earthquakes, floods, volcanoes, landslides, tropical cyclones, pandemics or wildfires are presented in the next section.

The better each household can plan ahead, reduce its risks (through structural, non-structural, infrastructural and environmental measures), develop response skills and store provisions, the greater its resilience will be. By following this guidance, households and families can protect themselves, recover quickly, and contribute to the rapid recovery of their community. Each household can be part of the solution, rather than part of the problem. This work starts with each and every one of us.

Risk RED

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 the 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 the risks, plan to reduce them, and prepare to respond.

Assess and plan

Key messages	Context-specific details
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. • Expect the unexpected.
Make a plan	• Include all household and extended family members in the planning process. • Meet with household and family members to discuss vulnerabilities and plan for the specific risks you face. • Determine what actions are needed to reduce 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. • Practise and update the plan regularly, to reduce risks and to prepare for those you cannot eliminate.
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. • Being prepared is everyone's responsibility. You can make the difference.
Consider access and functional needs and create and prepare a support network	• Consider the access and functional needs of each member of the household during a disaster. If anyone will need help, for any reason, plan and identify neighbours, friends, and/or co-workers who will provide assistance during an emergency. • Use imagination and your network to solve problems. • Make sure your network knows how to operate any personal equipment that you may need in case of emergency.
Make plans to reunite	• Agree on safe meeting places inside the house, outside the house and outside the neighbourhood. • Pre-authorize emergency contacts for school and childcare pick-ups. • Decide on primary and back-up out-of-area contacts to act as an information centre for your household or family.
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). • Put a copy where it can easily be found in the event of a disaster or emergency, and share it with your support network.
Know your building exit routes	• Identify your exits, and consider the safest exit routes in case of different types of hazards. • Keep exit pathways clear. • Identify a safe place away from your building (at home, at work, at school).

Make hazard-specific plans about whether to stay or go and where to shelter	• For different hazards and circumstances, you may have early warning ranging from several days to no warning at all. Discuss the various possible scenarios, and decide on your safe spaces – the best shelter and/or evacuation options – for each circumstance. • Prepare those safe spaces, whether in your home, outside or away from home.
Learn and participate in your community's early warning systems	• 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 increase after the early warning information is initially issued. • Follow evacuation instructions without hesitation. • Do not return home until local authorities say it is safe to do so.
Make an evacuation plan: know your shelter destination, evacuation route and transportation method	• Identify safe places where you can go if you need shelter or must evacuate. Everyone in the household should know where to go, and where to meet if they have to leave. • Plan alternate evacuation routes and methods, and practise your routes. • Work with your network to determine the transportation method if evacuation is necessary. • Ask the local emergency manager about community plans for directed evacuation and transportation options.
Learn the location of shelter, *safe havens* or temporary housing	• Arrange for temporary housing with relatives or friends away from the area at risk. • Learn the locations of shelters or *safe havens* for your community, and check to see if any special needs should be met. If these are not known in advance, find out how you will locate a shelter. • Plan ahead to reunite at the identified location, without detour or delay.
Keep copies of important personal documents	• Keep copies of important personal documents in your evacuation bag, with your out-of-area-contact, in a safe deposit box, and electronically (for example, on a cloud, hard disk or memory stick).
Include pets, service animals and livestock in your planning	• Plan how to take care of your animals. • Use collar tags, microchips or tattoos to identify animals if they are lost. Take a picture with your pet. • Keep vaccinations and records up-to-date, and take these details with you when evacuating. • Identify in advance how and where you can arrange for temporary shelters.
Pool your financial risks	• If possible, buy insurance or set up a self-insurance pool with a large group. Check that coverage includes all types of hazards you are likely to face, and make a complete inventory of your property. Keep this in a safe, out-of-area location.
Expand your circles. Continue your planning and plan with your neighbours and communities	• Know your neighbours. • Learn about the emergency and disaster plans at school and at work. • Get involved with workplace, school and community organizations, teams or projects to support ongoing assessment of vulnerabilities and capacities, planning, risk reduction and response-preparedness activities. • Share what you have learned.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Know your building	• Know the structural type of your home (for example, wood frame, confined masonry, reinforced concrete, adobe, steel, traditional wattle and daub, or rubble fill). • Learn local regulations on land use, construction, remodelling, landscape maintenance, fire safety and disposal of debris. • Consider having your building evaluated by a professional structural design engineer, if possible. Building codes are specific to the time when your building was constructed, and modern standards may be higher. Retrofitting may be advisable. • Learn about options to make your home safe from the hazards that you are likely to face.
Construct your home in a safe place in compliance with building regulations	• Consider possible hazards before selecting the site for your home. • Learn about your area's building codes before you begin construction.
Take annual home maintenance measures to keep your home safe	• Carry out an annual check to identify and correct conditions that make you more vulnerable to fire, ground movement, wind, water and severe weather. • Be sure that windows can be opened from the inside and that exits and emergency exits are not blocked. • Clear fire hazards. • Inspect and repair electrical systems. • Clean gutters and drains. • Service all heating appliances and chimneys. • Replace smoke alarm batteries.
Practise home fire prevention	• Do not permit smoking in bed or when lying down. • Keep matches, lighters and flammable or combustible products away from children and from heat sources. • Never leave a fire or candle burning unattended. • Avoid overloading electrical circuits. • Check wiring in your home, repair broken electrical cords, frayed or exposed wires or loose plugs. Do not run electrical cords under carpets. • Check and maintain connections on devices that run on gas. • Keep stove and heaters and surrounding areas clear of flammables. • Install working smoke detectors in sleeping areas and at each level in your home. • Dispose of ashes in a metal container and soak with water. • Use heaters certified for safety and follow manufacturers' directions. • Do not use kitchen ovens for home heating. • Do not operate or refuel electrical generators indoors.
Store hazardous materials safely	• Limit, isolate, eliminate and separate hazardous materials. • Store poisons and flammable products securely in closed, latched metal cabinets to prevent accidental fires, toxic combinations and hazardous materials release.
Protect your domestic animals and livestock	• Make sure any outbuildings, pastures or corrals are protected in the same way as your home.

Practise good hygiene and sanitation	• Wash hands well, using soap and water or sand. • Use toilets or other sanitary methods to dispose of human waste. • Do not defecate in the open air or near water sources. • Protect water and food supplies from contamination.
Protect your environment	• Conserve precious environmental resources: reduce, reuse and recycle. • Monitor and reduce energy and water use.

Prepare to respond: developing skills

Key messages	Context-specific details
Learn how to turn off your utilities	• Learn where, when and how to turn off utilities (water, gas and electricity). • Ensure there is a clear path to access utilities easily in case of emergency. • Where appropriate, install automatic shut-off valves. • If need be, keep a wrench or other tools available to access or shut off utilities.
In case of power outage, take fire precautions	• If there is a power outage for any reason, 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.
Learn how to react to fire	• If possible, move anyone who may be 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.
Extinguish small fires	• Extinguish small fires within the first two minutes of ignition by cutting off fuel, air or heat supply. • Put a fire extinguisher (ABC), bucket of sand or fire blanket in place and learn how to use it. Remember that the fire extinguisher must be maintained. • Before you fight the fire, keep your back to your escape route and stand 1.8–2.5 meters (6–8 feet) 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.
Use the correct fire extinguisher for the situation	Use the proper extinguisher: 1. **Pressurized water** for Class A ordinary fires, such as burning wood, paper, cardboard, plastics and textiles. 2. **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. 3. **Dry chemical powder** for fires in Class A, B or C.

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. Feel the doorknob and space around the door with back of your hand. Do not open the door 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 cloth. Place a wet towel at the bottom of the door to prevent smoke from entering the room.
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. • Do not forget your evacuation bag, with copies of personal documents. • Secure your belongings if you have time.
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.
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.
Respond to the needs of your animals	• If you have animals, evacuate early with them or make sure any outbuildings, pastures or corrals are protected. • If you must leave animals behind, do not leave them tied or shut in buildings. Leave dry food.
Use telephones only for emergencies	• Keep phone use to an absolute minimum. Use them only to request outside assistance for physical injury and damage. Otherwise, leave phone lines open for emergencies. • Learn the phone numbers for reporting fire and other emergencies. Keep these by your phone or programmed into the handset. • Keep your mobile phone with you. Minimize use to conserve batteries. • Use short text messaging rather than voice, and only to convey vital emergency information rather than to satisfy curiosity. • Send just one short message via mobile phone to report your status to your out-of-area contact. Learn emergency hash tags for emergency social messaging.
Maintain communication	• Make sure street signs and house numbers are clearly marked so that emergency responders can help you.
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.

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. • Strain water through fine clean cotton. This is an important first step. Follow this by disinfection, sedimentation or filtration.
After hazard impact, help those around you	• First, check your own security and safety, followed by that of 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, wipe the mouth clean and administer rescue breaths – use protective barrier if possible. • Maintain normal body temperature (not too cold or too hot) and raise legs by about 20–30cm (7–12in), above the heart. • Stop bleeding only by using pressure and elevation, not by tourniquet.
After hazard impact, check for damage	Follow the specific advice below for the situation in question: • **Gas:** Check for leaks. If you smell gas, hear a blowing or hissing noise or see a broken gas line, open a window and get everyone outside and away from the area quickly. Seek professional help. Extinguish all flames. Do not light flames of any kind. Do not touch electrical switches. • **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.
After hazard impact, take care of yourself	• Keep 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 debris, wash your hands thoroughly with soap and water.

After hazard impact, support response, clean-up and recovery	• Help speed up recovery by showing solidarity with your neighbours and working together in an organized way.
	• Volunteer in local disaster response, assisting with:
	  • opening blocked emergency transportation routes
	  • checking for damage to water, sewage, gas and electrical lines and reporting these
	  • first aid
	  • fire suppression (for example, through bucket forming line to pass water buckets)
	  • logistics support to professional responders (for example, cutting wood for search and rescue in building collapse)
	  • creating shelter
	  • preparing and distributing water and food
	  • supervising children
	  • attending to escaped pets
	  • creating sanitary and private pit toilets
	  • making sure that shelter, water, sanitation, and food distribution is accessible to people with various access and functional needs.

After hazard impact, support each other	• When in distress, sadness, grief, anger and a range of other unusual behaviours 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 is helpful. • Continue to practise preparedness together.

Prepare to respond: storing provisions

Key messages	Context-specific details
Check your phones	• Make sure you have at least one non-electric, non-cordless landline phone in case of power outage. • For mobile phones, keep an extra battery or manual or solar charger available.
Store water and food	• Store enough clean water and non-perishable food to survive for about a week – 25 to 30 litres (7 gallons) for each household member. About half of this is for drinking or cooking and half for sanitation. • Keep the water in clean, closed containers.

Store response provisions at home, work and school	• Keep the following provisions in a secure place – outside your home, where possible:
	  ◦ emergency contact information and copies of vital records
	  ◦ Between 25 to 30 litres (7 gallons) water per person. This is sufficient for survival for one person for one week based on an estimated two litres (half a gallon) for drinking and another two for sanitation. Include allocations for pets and service animals. Replace every six months.
	  ◦ Enough non-perishable food to last for at least seven days. Remember infant and other special dietary needs of family members and pets or service animals. (Check expiry dates every six months)
	  ◦ first aid kit and prescription medications
	  ◦ dust mask to filter contaminated air
	  ◦ torch/flashlight – 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
	  ◦ clothing and toiletries, including rain gear, a change of underclothing, sturdy shoes and work gloves
	  ◦ bedding and towels
	  ◦ personal items to meet the needs of each household member including assistive devices such as spectacles.

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 with you when you evacuate.

After power outage throw away contaminated food and water	• Check refrigerated food for spoilage. If in doubt, throw it out. • Avoid drinking or preparing food using water that may be contaminated.

Purify water	• Even if water looks clean, it may be contaminated. If it is of questionable purity, carry out the following steps:
	  ◦ remove solids by filtering the 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 bleach, mix well, and let stand for 30 minutes (one drop of bleach per litre of water, eight drops per gallon, or one capful per 20-litre jerry can).
	• Alternatively, place water 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 and closed container.

This section is complemented by the hazard-specific messages. Please refer to section B.2.

Family safety plan checklists

The templates below demonstrate practical tools that can be based on adaptation and adoption of the all-hazards and relevant hazard-specific messages found in this book.

Assess and plan

☐	We have an Evacuation route map available for everybody in the household.
☐	We have Emergency supplies which are easily transportable (for evacuation or field trips) in place.
☐	We know the location of our fire extinguishers or fire suppression material and we know how to use it.
☐	We have completed our family safety plan at home and with our child care providers (if you have your own children).
☐	We have planned quiet activities that children can do in the assembly area in the event of an emergency or a drill.
☐	We know that we will only use the telephone in case of physical emergency after a disaster. We will use radio and television for information.
☐	We know where we will reunite in case of the hazards we face Inside the house: Outside the house: Outside the neighbourhood: and we have a private message drop location outside our house.
☐	We made copies of important documents and key addresses and phone numbers. We have one set with our out-of-area contact and/or we keep one in our evacuation *go-bag*.
☐	We are spreading the word to everyone we know.
☐	We participate in emergency planning with the community.
☐	We make our expectations known to local, regional and national policy-makers.

Reduce dangers

☐	We have taken steps to minimize our dangers. For earthquake: We have fastened tall and heavy furniture, appliances, large electronics, lighting fixtures and other items that could kill us or our children, to wall stud or stable surface. For storms: We have shutters or similar window protection.
☐	We know never to light a match, lighter, or any other flame after an earthquake until we are sure there is no danger of gas leakage anywhere around.
☐	Our building has been designed and built following seismic, wind or flood codes, or it has been inspected by a qualified engineer, and required repair or retrofit has been completed.
☐	We maintain our building, protecting it from damp, and repairing damage when it occurs.
☐	For earthquake: We have put latches on kitchen cabinets, secured televisions, computers and other electronic items and hung pictures securely on closed hooks to protect ourselves from things that could injure us, or would be expensive to replace.
☐	We have a fire extinguisher, check it annually and maintain or replace it when expired.
☐	We have secured family heirlooms and items of cultural value that could be lost to future generations.
☐	We have limited, isolated, and secured any hazardous materials to prevent spill or release.
☐	We keep shoes and flashlights with fresh batteries, by our beds. In the event of flooding: We keep flotation device or life jacket on the highest floor in the building. For fire: We have cleared away fire hazards from around our home. For water and debris flow: We have created channels and are prepared to make sandbags.
☐	We have protected ourselves from glass-breaking with heavy curtains, window film or shutters.
☐	We consciously reduce, reuse and recycle our resources.

Response capacity: develop skills and store provisions

☐	We know how to use a fire extinguisher.
☐	We know how to turn off our electricity, water and gas.
☐	For advanced warning: We understand early warning systems and know how to respond. For earthquake: We have practiced *drop, cover and hold on* and identified safest places next to strong low furniture, under strong table, away from windows. If our roof cannot take the additional load or is damaged, we have practiced running out to a clear space.
☐	We have gathered survival supplies in our home and packed evacuation bags for our home and car. This includes one gallon of water per person per day and food for three days, prescription medications, water, high energy food, flashlight, battery, first aid kit, cash, change of clothing, toiletries and special provisions we need for ourselves, including for older persons, differently abled people, small children, and animals.
☐	We know principles of standard emergency management system for organizing post-disaster self-help in our community.
☐	We have learned first aid, light search and rescue, fire suppression, wireless communication, swimming, or community disasters volunteer skills.

Family safety plan template

Family last name(s) or household address:	Date:

Family member/household contact information
(If needed, additional space is provided in #10 below):

Name	Home phone	Cell phone	Email

Pet(s) information:

Name	Type	Colour	Registration #

After a disaster, let your friends and family know you are okay. You can give them a call, send a quick text or update your status on social networking sites.

Plan of action

1. The disasters most likely to affect our household are:

2. What are the escape routes from our home?

3. If separated during an emergency, what is our meeting place near our home?

4. If we cannot return home or are asked to evacuate, what is our meeting place outside of our neighborhood?

5. In the event we are separated or unable to communicate with each other, our emergency contact outside of our immediate area is:

Name	Home phone	Cell phone	Email

6. If at school/daycare, our child(ren) will be evacuated to:	
Children's name	**Evacuation site (address and contact info)**

7. Our plan for people in our household with a disability or special need is:	
Person's name	**Plan**

8. During certain emergencies local authorities may direct us to *shelter in place* in our home. An accessible, safe room where we can go, seal windows, vents and doors and listen to emergency broadcasts for instructions, is:

9. Family member responsibilities in the event of a disaster

Task	Description	Family member responsible
Disaster kit	Stock the disaster kit and take it if evacuation is necessary. Include items you might want to take to an evacuation shelter. Remember to include medications and eye glasses.	
Be informed	Maintain access and monitor local radio, television, email or text alerts for important and current information about disasters.	
Family medical information	Make sure the household medical information is taken with us if evacuation is necessary.	
Financial information	Obtain copies of bank statements and keep cash with you in the event ATMs and credit cards do not work due to power outages. Bring copies of utility bills as proof of residence in applying for assistance.	
Pet information	Evacuate our pet(s), keep a phone list of pet-friendly motels and animal shelters, and assemble and take the pet disaster kit.	
Sharing and maintaining the plan	Share the completed plan with those who need to know. Meet with household members every six months or as needs change to update household plan.	

10. Other information, if not able to be included above.

Congratulations on completing your family disaster plan! Please tell others.

PART B.2

HAZARD-SPECIFIC KEY MESSAGES

The following section provides key messages related to specific hazards.

DROUGHT

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

Drought is a long-lasting event triggered by a lack of precipitation. It is a slow-onset phenomenon consisting of an extended period of time characterized by a deficiency in a region's water supply that is the result of constantly below average precipitation (low rainfall, snowfall or snowmelt). The shortages of water for drinking, sanitation and irrigation have an impact on ability to sustain agriculture, livestock and livelihood, and can lead to food insecurity, spread of disease, malnutrition and starvation, migration and dislocation, and economic losses. Drought can also adversely affect power generation, transportation and commercial or industrial needs.

Periods of abnormal dryness are a recurrent feature of climate, and are often predictable. 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.

Assess and plan

Key messages	Context-specific details
Be informed	• Learn about monthly, seasonal and long-term weather outlooks and what they may mean in your area. • Understand the optimal weather conditions for different agricultural practices and water requirements, and compare with current practices. • Find out about communication channels for early warning about drought in your community.
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.

Participate in planning for rationing of water and food	• Plan for an initial basic ration of food equivalent to about 2,100 calories per person per day. The food ration 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 beans, peas, lentils.*
	• Learn about the most vulnerable people in the community, including who and where they are and how you can help them.

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.

Assess epidemic risks and plan for prevention	• Stay in contact with your primary health care providers and learn about:
	  ◦ how to keep water clean or purify it
	  ◦ good sanitation and hygiene practices
	  ◦ available immunization programmes
	  ◦ the air-, water- or vector-borne risks you may face
	  ◦ what kinds of information requires communicating.

Plan to improve your household food security	• Buy crop insurance. • Plant backyard gardens. • Set up seed banks.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Participate in community water resource management	• Protect water catchment areas from evaporation and contamination (for example by using pesticides), and minimize waste.
Prevent deforestation and practise reforestation	• Protect water catchment areas from deforestation. • Re-forest water catchment areas.

Conserve water in soil through sustainable agriculture and landscaping practices	• Plant trees – especially species that need little water – and mulch around them.
	• Use mulching and other crop covers to capture or retain water and reduce evaporation.
	• Recycle irrigation water.
	• Avoid waste of irrigation water due to poor-quality irrigation canals.
	• Identify and cultivate early maturing, drought-tolerant crops.
	• Reduce run-off and improve rainwater infiltration by planting barriers such as vetiver, lemongrass or agave.
	• Implement crop diversification and inter-cropping to improve yields by having plants complement and support each other.
	• Avoid slash and burn agriculture.
	• Practise conservation agriculture. This involves:
	  ◦ ensuring minimum mechanical soil disturbance ('no-till' techniques) to maintain minerals, stop erosion and prevent water loss
	  ◦ managing topsoil to create permanent organic soil cover, allowing for growth of organisms
	  ◦ practising crop rotation with more than two species.
	• Increase soil fertility and water retention by using animal compost and plant manures to add nutrients and organic matter to soil.
	• Replace sprinkler systems with drip irrigation, applied close to plant roots to prevent waste.
	• Use a soil moisture indicator to see when watering is needed. Water the garden or ground cover early in the day, and not on windy days.
	• Lay green driveways and water-permeable asphalt rather than concrete.

Conserve water by minimizing outdoor usage	• Inspect pipes and outdoor taps for leaks, and repair them. • Store water at the household level. • Cover wells to reduce evaporation. • Harvest rainwater in aboveground or belowground tanks. (**Note:** the water may need purification treatment before it is safe to drink.) • Use alternatives to water (for example, sand for washing). • Avoid over-grazing and manage the stocking rate. • Recycle household grey water for toilet, and for irrigation and home gardens. Recycle fish tank water for plants. • Reduce water consumption by landscaping with low-water plants and rock gardens. In rainy conditions, turn off automatic sprinklers. • Conserve water outdoors by cleaning pathways with a broom (not water), washing cars with a bucket, and covering pools to reduce evaporation. • Insulate hot water pipes. • Where livestock use the same source as people, explore alternative methods of water usage.

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
	  ◦ install aerating taps and low-flow showerheads
	  ◦ clean vegetables in a basin rather than under running water
	  ◦ clean greasy hands with waterless hand cleaner
	  ◦ install composting toilets or low-volume toilets, or place a brick or sealed bag of water into toilet cistern to reduce flush water
	  ◦ wash dishes using two basins rather than doing it under running water
	  ◦ in washing machines, match the load setting to amount of laundry, or wash full loads only.

Protect yourself in your home	• Close windows and doors to keep heat outside. • Create natural ventilation flows inside the house. • Drink plenty of water. • Limit use of fire stoves and cookers.

* Kadihasanogu A. Guide on how to secure food and livelihoods of communities in a pandemic influenza. Geneva: IFRC, 2009.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details

Stockpile essential foods	• Consider which of the following three levels of food security or insecurity you may face:
	  ◦ self-sufficient
	  ◦ food insecure
	  ◦ food and livelihoods insecure.

Preserve and store food year round	• Preserve and store dry food, tinned food and grains that last 3–12 months. • Store dried yeast, sugar, jams, chutneys, sauces, tealeaves, peanut butter and biscuits. • Store products to produce fresh food at home, such as, yoghurt (milk powder, water and yoghurt culture), herbs, germinated seeds (bean sprouts, onion seeds).

Learn principles of good nutrition	• In average conditions, 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 to about 2,100 calories per person per day. 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 the community, including who and where they are and how you can help them.
	• Expand diets by cultivating foods in backyard gardens and foraging.
	• For good nutrition, eat from each of these four food groups, every day:
	Group 1
	• dried vegetables and fruits
	• tinned/canned vegetables and fruits
	• bottled vegetables and fruits
	• vegetable and fruit juices
	• dried herbs
	• tomato paste
	• products that can be stored (in the cool and dark) for a relatively long time, such as garlic, onions, potatoes, apples, citrus fruits, carrots and cabbage.

	Group 2 • peas, beans and lentils • tinned/canned beans • milk powder (full fat)* or evaporated or long-life milk • cheese that does not require refrigeration • dried meat and dried fish • tinned/canned meat and fish. **Group 3** • grains such as sorghum, millet, rice, corn or wheat • cassava, yam or plantain • pasta, cereals or flour • bread of all kinds • crackers • noodles • instant products, such as dried mashed potato. **Group 4** • oil • seeds, including sesame and sunflower. • If no fresh food is available, vitamin supplements are recommended. • Use salt and condiments to make food tasty.
Mitigate loss of livestock	• Manage pastures or rangelands to protect livestock. • Decide the optimal number of animals that the household can maintain. • Plan de-stocking of animals before the crisis affects them seriously. • 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.

* Kadihasanogu A. Guide on how to secure food and livelihoods of communities in a pandemic influenza. Geneva: IFRC, 2009.

EXTREME HEAT/HEAT WAVE

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

A heat wave is an extended period of unusually high temperatures and often high humidity that causes temporary modifications in lifestyle and may have adverse health effects on the affected population. The World Meteorological Organization (WMO) defines a heat wave as a period during which the daily maximum temperature exceeds for more than five consecutive days the maximum normal temperature by 9 degrees Fahrenheit (5 degrees Celsius), the *normal* period being defined as 1961–1990. Because of global warming, the frequency, duration, and severity of heat waves are predicted to increase in most parts of the world. The impacts on human health, regional economies, and ecosystems may be significant.

Since 1950, the number of heat wave incidents worldwide has increased and the duration of these has become longer. Heat wave impacts even otherwise heat-tolerant populations. For example, in 2015 cases of more than 1,100 deaths were reported across India, it was exceptionally hot in Morocco, Portugal and Spain (May), and across Europe (June–July). In the latter case, scientists said it was virtually certain that climate change increased the likelihood of this particular heat wave.[3]

Extreme heat can lead to people suffering from shock, getting dehydrated, developing acute heat illnesses and worsening of chronic cardiovascular and respiratory diseases. National Societies can promote simple heat preparedness measures outlined here.

Resource for further reference: Small and simple actions to address climate change. Geneva: IFRC, 2016.

3 climatecentre.org/news/616/ifrc-science-partners-european-heatwave-exacerbated-by-climate-change

Assess and plan

Key messages	Context-specific details
Know your area's vulnerability to extreme heat	• Learn about the risks and potential impacts of extreme heat that can impact your location. • Find out about communication channels for early warning of very hot days in your region.
Be aware of protection and shelter around you	• Be aware of the shade that trees can provide. • Look for shade facilities in cities such as storefronts, traffic booths etc. • Work with your community to identify places for community members to go and cool off during heat and power outages.
Know and raise awareness of the dangers of heat waves	• Plan for how to change and adapt essential activities during a heat wave in order to avoid exposure to direct sunlight. • Understand the symptoms of heat-related illness and know expedient treatment and where to seek medical attention. • Be aware if you are part of a potentially affected group.
Know your nearest points of medical support	• Hospitals and medical centres can potentially offer ice, cooled water and other support.
Prepare warning mechanisms in the community	• Involve youth and volunteers to support with extra care and activities in communities. • Instruct health workers and community members in the specific risks of heat waves and train them to respond quickly.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Prepare tools to build temporary cooling/ shade structures	• Construction of cooling and/or shade areas is all the more difficult in extreme heat; preparation in time of less heat can facilitate such tasks.
Protect your living space	• Keep rooms cool by using shades or reflective material outside the windows. If this is not possible, use light-coloured curtains and keep them closed (metallic blinds and dark curtains can make the room hotter). • Ensure your home has air conditioning if possible.
Adapt your eating and drinking habits to stay hydrated	• Plan ahead to make sure you have enough supplies, such as food, water and any medication required. • Eat small meals but eat more frequently. • Drink even if you do not feel thirsty. • Map points of potable water in the community to be aware of where you can rehydrate yourself.
Modify daily routines	• Try to avoid sport and heavy exercise or working during peak hours of the day.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Stay informed: monitor weather, listen to the radio and follow instructions	• Monitor the weather closely to see if extreme hot weather conditions, a heat wave watch or warning is expected in your area (usually there will be several days of lead time).
Avoid direct exposure to the sun	• Keep out of the sun, especially during peak hours. • If you are outside during peak hours, walk in the shade, and cover your head using a wide-brimmed hat, parasol, or turban. • Use sun protection/sunscreen with a high level of UVA/UVB protection.
Protect yourself with appropriate clothing	• Wear loose-fitting, lightweight, light-coloured clothing. • Avoid dark colours since they absorb heat.
Stay hydrated	• Always carry a bottle of water. • Assist others: hand out water during events, traffic jams, to people at risk. • Remind the elderly, who lack thirst stimulus, to drink regularly (offer more water and soup) – one should drink at least 2 litres of water per day. • Avoid alcoholic drinks, too much of sweet and/or very cold drinks since these can cause stomach cramps.

Be aware of the symptoms of heat induced sickness	• Seek medical help if symptoms such as breathlessness, chest pain, confusion, weakness, dizziness or cramps get worse or do not go away. • Medical attention is needed if heat cramps last more than one hour. • Rest immediately in a cool place if you have painful muscular spasms and drink oral rehydration solutions containing electrolytes. • Cancel strenuous activities planned or reschedule them until the coolest time of the day.
Connect with your peers	• Use a buddy system when working in extreme heat, and reach out to those that are at risk or vulnerable.
Stay aware of people and animals at risk around you	• Check on family, friends and neighbours who do not have air conditioning, who spend much of their time alone or who are more likely to be affected by the heat. • Check on your animals frequently to ensure that they are not suffering from the heat. • Stimulate solidarity and ask people to reach out proactively to support the elderly and chronically ill during times of extreme heat (family, neighbours, friends). • Never leave an animal inside a vehicle on a hot day.
Cool yourself down	• Have cold drinks and avoid excess alcohol, caffeine, and hot drinks. • Eat cold foods, particularly those with high water content. • Take a cool shower. • Keep curtains or blinds closed indoors. • Use air conditioning or fans if the temperature outside is above 95 degrees Fahrenheit (35 degrees Celsius) with high humidity. • Keep a damp cloth on the back of your neck.

EXTREME COLD AND WINTER STORMS/COLD WAVE

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

A cold wave is a weather phenomenon that is distinguished by marked cooling of the air, or the invasion of very cold air, over a large area. It can also be a prolonged period of excessively cold weather, which may be accompanied by high winds that cause excessive wind chills, leading to weather that seems even colder than it is. It is marked by a drop of average temperature well above the averages of a region, with effects on human population, crops, properties and services. Cold waves can be preceded or accompanied by significant winter weather events, such as blizzards or ice storms. Other names of a cold wave include cold snap and deep freeze.

Extreme cold can bring winter storms, sleet and freezing rain – presenting risks as staying safe and warm can become a challenge. Overexposure and overexertion in the cold can cause hypothermia, frostbite and cardiac arrests. During winter storms, icy roads lead to increased vehicular accidents. Many homes may lose power and be too cold, with heating systems not adequately prepared for the weather. Space heaters and fireplaces inside can increase risk of carbon monoxide poisoning and household fires.

Extreme cold and its effects vary by location, but preparedness measures can be taken by all to protect oneself and the household. Below are measures to take into consideration during extreme cold and winter storms.

Assess and plan

Key messages	Context-specific details
Know your area's risks for extreme weather conditions	• Know the local weather patterns and terrain to better understand the risks. • Find out about communication channels for early warning of extreme cold and winter storms in your community. • Consider risk factors such as proximity to rivers, lakes, and water channels that may be at risk of ice or flooding.
Know your nearest points of medical support	• Be aware of hospitals and medical centres nearby in case at risk of hypothermia or frostbite.
Prepare warning mechanisms with community	• Involve youth and volunteers to support with extra care and activities in communities. • Instruct health workers and community members in the specific risks of extreme cold and winter storms, and train them to respond quickly.
Know the risks and plan for cold weather effects on crops and livestock	• Freezing weather can damage or kill produce, including livestock. • Freezes and effects are significant; understand the risks and tolerance of each livestock and plant species to cold temperatures and water access.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Prepare home supplies keeping winter storms in mind	• Primary concerns during a winter storm are loss of heat, power, telephone service, and a shortage of supplies. • Have bottled water available in case pipes freeze and stock up with several days of food supplies when a snowstorm is expected. • Keep a flashlight, extra batteries, and a portable radio available. • Have an emergency heat source such as fireplace, wood stove, or space heater that is properly ventilated. • Review your generator safety. Never operate it in an enclosed space. • Make sure your carbon dioxide detector is working and that the outside vent is clear.
Prepare your vehicle for winter	• Equip your vehicle's tires in preparation of snow and icy road conditions. • Build an emergency supply for your car that includes jumper cables, a first aid kit, cell phone charger, flashlight, warm clothing items, snow shovel and brush, and a spare tire. • Make sure your vehicle as a full tank of gas.
Be aware of groups at risk	• Assist older people and those who are weak. • Have a plan and shelter in place to protect your animals; haul extra feed near animals. Have water available, as animals are at risk of dehydration during winter storms.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Stay informed: monitor weather, listen to the radio and follow instructions	• Monitor the weather closely to see if extreme cold weather conditions, a winter storm watch or a winter storm warning is issued in your area.
Stay hydrated	• Drink plenty of warm fluids to help keep your body warm. • Avoid alcohol.
Protect yourself with appropriate clothing and cover exposed skin	• Wear clothing appropriate for cold weather. • Synthetic and wool fabrics provide better insulation, as some synthetics are designed to keep perspiration away from your body and keep you dry. • Dress in layers with a wind resistant outer layer. • Wear warm socks, gloves, a hat and a scarf. Be sure to cover your nose to protect it. • If you get wet, change into dry clothing as soon as possible. You lose heat faster when you are wet.
Be aware of the symptoms of cold-induced sickness	• Seek medical help if symptoms of hypothermia or frostbite occur. • Avoid overexertion (which can cause cardiac arrest), often caused by clearing the snow. • Avoid exposure to extreme cold and snow. • Stay hydrated.
Stay aware of people at risk around you	• Check on family, friends and neighbours who are more likely to be vulnerable to extreme cold. • Stimulate solidarity and ask people to reach out proactively to support elderly, chronically ill during the cold (family, neighbours, friends).

Protect your pets and livestock	• Make sure your pets and livestock or farm animals have plenty of food and water and are not overly exposed to extreme cold.
Seek shelter immediately	• Avoid driving if possible. • Avoid exposure to extreme cold and snow.
Protect your home and use appropriate supplies	• Running water, even a trickle, can help prevent pipes from freezing. • Do not use alternative heating sources inside your home, i.e. a generator. • Do not use heating and cooking devices intended for outdoor use that are not designed with ventilation.
During a winter storm, if you are in a vehicle, avoid unsafe conditions	• Avoid travelling alone and at night. • If trapped, remain inside the vehicle. • Drive slowly in the snow, as ice can be difficult to see.
Be aware of ice safety on ponds and lakes	• Always check the thickness and colour of ice – grey indicates the ice is not thick enough. • Ice should be a clear blue (>12 cm thick) before its considered safe to step on.
Be aware of dangers following the storm	• After a storm, be aware of power outages. • Flooding caused by snow melting; drive safely if on the road. • Check pipes since these may be frozen, as water expands when it freezes and can cause pipes to burst. • Salt walkways if possible and shovel snow from your sidewalks to reduce risk of injury from slipping on ice.

MAJOR EPIDEMIC AND PANDEMIC DISEASES

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

A number of communicable diseases can constitute significant threats at local, regional or global levels leading to epidemics or pandemics. An epidemic refers to an increase, often sudden, in the number of cases of an infectious disease above what is normally expected in a given population in a specific area. Examples of major epidemics include cholera and diarrhoeal diseases, measles, malaria, and dengue fever. A pandemic is an epidemic of infectious disease that spreads through human populations across a large region, multiple continents or globally. These are diseases that infect humans and can spread easily. Pandemics become disasters when they cause large numbers of deaths, as well as illness, and/or have severe social and economic impacts. Concerns exist about potential pandemic diseases including new strains of influenza, such as severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) to which humans may not have immunity. In the past, pandemics have included cholera, smallpox, leprosy, measles, polio and yellow fever.

- Epidemics and pandemics can be:
- Airborne: transmitted by air and droplets, for example, flu, measles, SARS, MERS;
- blood and/or body fluids borne: transmitted through contact, including blood transfusion, mother to child in utero, and sexual activity, for example, Ebola virus, HIV;
- waterborne: transmitted by water, for example, cholera;
- zoonotic: transmitted between animals and people, by direct and indirect contact, for example, viruses, bacteria, parasites, and fungi;
- vector-borne: transmitted by being bitten by mosquitos, fleas, ticks etc., for example, malaria, dengue, plague; and
- food-borne: transmitted by preparing and eating food, for example, salmonella, listeria and hepatitis A.

Epidemics and pandemics can be prevented and mitigated through a range of household and community measures, such as:

- good hygiene and sanitation
- access to clean water
- handwashing
- vaccination
- use of antiviral medications
- social distancing
- good clinical practice
- proactive surveillance
- early warning systems
- vector control
- access to safe food.

Assess and plan

Key messages	Context-specific details
Protect sources of clean water	• Protect water sources from contamination by animals and wastewater. • Use water sources with care and maintain them.
Use latrines	• Clean and proper toilets prevent disease.
Vaccinate children to keep them safe	• Maintain vaccination cards for babies and children. • Keep vaccinations up-to-date. • Participate in vaccination campaigns. • Vaccinate against polio, diphtheria and measles.
Stay informed by local health authorities about epidemics and pandemics that might occur in your location	• Be aware that possible pandemic threats, and transmission occurs through air, water, food, vectors and/or exchange of body fluids. • Stay informed about airborne, waterborne, food borne, vector-borne diseases and those caused by exchange or body fluids.
Keep your community informed about prevention of disease	• Teach community members how to take care of themselves and to maintain healthy practices. This will prevent the spread of disease and epidemics.
Keep communities clean to keep your family healthy	• Keep your communities clean. This will help prevent germs from spreading and breeding of vectors.
Keep the community safe – call the country specific number for poison alerts to report unusual sickness in animals	• Notify authorities of any unusual incidences of sickness in people or animals immediately.

Mitigate risks: physical or environmental

Key messages	Context-specific details
A. General	

Use clean and safe water sources	• Provision of safe drinking water is the most important prevention measure for many diseases.
	• Protect water sources from contamination by animals and wastewater.
	• Use water sources with care and ensure these are well maintained.
	• Risk factors include:
	  ◦ sick animals
	  ◦ sick people
	  ◦ unprotected water sources
	  ◦ leaking septic tanks and latrines
	  ◦ contaminated surface water runoff entering wells and springs
	  ◦ animals using the same source as people
	  ◦ objects falling into a well.

Keep water clean with safe water storage practices	• Always clean your hands and use clean utensils when collecting and storing water. • Use clean vessels and closed containers for transportation and storage of water. • 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 do not contaminate water. • Remove standing water to prevent mosquitoes from using these as breeding sites and contaminating it.
Purify water appropriately	• Learn and practise reliable methods for purifying water for your household (e.g. aqua tabs, chlorine).
Practice good personal hygiene	• Learn how to wash hands properly, using clean water and soap. • Always wash hands after using the toilet, and before and after handling food and eating. • Bathe regularly.
Practise good sanitation	• Dispose of any domestic, human or animal waste, without contaminating soil and water. • Dispose of any waste that attracts flies and insects. • Keep your house and surrounding clean, eliminate any stagnant water that can become a breeding site for mosquitoes or any other vector.

Keep food clean	• Keep food clean and covered to keep flies, rodents and animals away. • Cook food thoroughly. • Always handle and prepare food with clean hands and use clean utensils. • Wash fruits and vegetable thoroughly with clean water before eating. • Thoroughly cook meat. • To prevent cross-contamination separate raw meat from fresh produce such as fruits or vegetables when shopping and storing in the refrigerator and where possible use different cutting boards for fresh produce and raw meat.
Dispose of human and animal waste safely	• Dispose of humans and animal waste safely to protect the environment. • Avoid contaminating water sources. To prevent diseases from spreading use latrines and do not defecate in the open. • If latrines are not available, defecate at a safe distance from houses, water sources and places where children play. Bury faeces immediately or cover with earth, sand or ash. • Locate trench and pit latrines away from water sources (raised, where there is a shallow water table) and keep them clean. • Make sure pit latrines are emptied or replaced regularly by trained people with mechanical and protective equipment, rather than manually.
B. Airborne diseases	
Wash your hands	• Wash your hands well using clean water and soap. • This is of critical importance before and after you have contact with people who are sick.
Cover your mouth and nose when you cough or sneeze	• Always cover your mouth and nose 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. • Avoid touching your mouth, nose, or eyes with your hands unless you have just washed your hands.
Keep your distance (avoid and limit close and unprotected contact with sick people).	• When there are contagious diseases, keep a safe distance and avoid crowds if possible. Stay 1–2meters (3–6.5 feet) away when talking to people. Avoid physical contact when greeting people, for example, do not shake their hands or kiss them. • Limit unnecessary visits to sick people or hospitals. • Keep safe distance when talking to and/or interacting with people. • Avoid crowded places as much as you can, and stay home if you show signs of illness.
Dispose of waste	• Dispose of your waste and exposed materials. Throw out used masks and tissues properly by placing them in a bag and sealing it, before burning or burying them.

Separate and care for your sick	• Separate and care for sick members of the household in order to limit the spread of the illness:
	  ◦ Separate family members who are sick by moving them into a room, corner of the house, or outside if the weather permits.
	• The caregiver should use the following safety measures:
	  ◦ Use a mask when less than 1 meter (3 feet) from the person who is sick.
	  ◦ Always put protective clothing on when you are in the room and remove it before leaving the room.
	  ◦ Wash hands after providing care.
	• Family members should monitor themselves daily for fever and cough. Make sure that young children, pregnant women and people who are suffering from another disease receive medical care if they get sick.

C. Blood or body fluid borne diseases	
Keep your distance (avoid or limit close and unprotected contact with sick people)	• Where possible, do not care for the sick at home and take appropriate measures. If at home, separate sick household members from the others and care for them separately and appropriately. • Use protective equipment as required including gloves, apron, eye protection, and mask. • Do not touch a sick person with suspected disease symptoms. • Do not share household items with sick people.
Wash hands well	• Wash your hands well using clean water and soap if available. • Washing hands is of critical importance before and after you have contact with people who are sick.
Practise safe sex	• Do not engage in unprotected sexual activity. Use a condom. • Do not introduce other people's body fluids into your mouth.
Protect household members from contaminated blood and body fluids	• Use protective equipment (mask, glove, eye and mouth protection) if needed. • Be sure to clean and disinfect blood and body fluids.
D. Zoonotic diseases	
Avoid or limit contact with animals that might be infected. This includes domestic animals, wild animals and pets, since they can transmit serious illnesses	• Always wash hands after touching animals and their habitat. • Never touch sick or found animals without using protective gear. • Avoid contact with birds and poultry in locations with flu outbreak. • Avoid contact with animals like bats and chimpanzees since they are common carriers of viral haemorrhagic fevers – Ebola virus. • Avoid unprotected contact with camels during a MERS-COV epidemic.
Do not eat animals that may carry disease	• Never eat animals that are sick or found dead. • Do not drink unpasteurized milk or eat raw meat. Cook meat thoroughly.
Practice dog bite prevention	• Avoid handling and approaching unknown dogs.
E. Vector-borne diseases (from bites)	
Control mosquitoes indoors and outside	• Eliminate stagnant water since this can become a mosquito-breeding site. • Empty any containers that hold water, and dispose of garbage and containers where mosquitoes can breed. • Clean gutters, empty or treat swimming pools and ponds (or use guppies that will eat the larvae). • Use screens on windows and doors.

Prevent insect bites	• Carriers (infected person) should avoid being bitten by a mosquito since they can spread the pathogen (disease-producing agent, especially a virus or bacteria for instance). • Wear long-sleeved light coloured clothing. • Regularly use insecticides and repellents to protect from day-biting mosquitos (These can spread zika, yellow fever, chikungunya and dengue).
Sleep under mosquito nets	• Sleep under long lasting insecticide treated nets (LLIN) in malaria endemic areas to reduce exposure to malaria-carrying mosquitoes. • Make sure that older people or infants and children, who sleep during the day, sleep under a LLIN.
Use insect repellent according to instructions	• Follow instructions on product label. • Do not use on babies younger than two months. • Do not apply to child's hands, eyes, mouth, or cut or irritated skin (apply by hand to face). • Do not use produces containing lemon, eucalyptus or paramethane-diol on children under three years old. • Do not spray repellent on skin under clothing. • If using sunscreen, apply that first.
F. Food borne diseases	
Keep yourself and the environment clean and safe	• Wash hands, tools, and surfaces before, during, and after handling and preparing food using clean water. • Keep all kitchen surfaces, tools, and cloths clean. • Avoid mixing or keeping raw meat, fish and eggs together. Wash your hands and any surface and/or utensils that have been used to store or prepare raw meat, fish and eggs since bacteria from these can be transmitted to cooked food and/or be ingested.
Cook and reheat cooked food thoroughly	• Raw poultry, meat, eggs and unpasteurized milk can be contaminated. Cooking (and re-heating) these thoroughly at 158 degrees Fahrenheit, i.e. 70 degrees Celsius will kill any pathogens.
Eat cooked foods immediately	• When cooked food cools to room temperature, it can develop harmful bacteria. Prepared should be eaten immediately.
Store cooked foods carefully	• Cooked food can be safely stored hot (near or above 140 degrees Fahrenheit or 60 degrees Celsius or cool (near or below 33.8 degrees Fahrenheit, i.e. 10 degrees Celsius). • Refrigerate cooked food within two hours of preparation.
Protect foods from insects, rodents and other animals	• Store food in closed containers to prevent contamination.
Choose food processed for safety	• Many foods (such as fruit and vegetables) are best in their natural state. • Milk and dairy products are safest when pasteurized, and poultry when treated for safety with ionizing radiation.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Listen to and follow official advise of health authorities, regarding preventive and protective measures	• Authorities usually have reliable information, and a wider picture to analyse the situation and provide instructions for safety. • Wash hands with soap and water. • Do not touch your mouth, eyes or noose with unwashed hands to reduce the risk of infection by germs including spread of flu, viral haemorrhagic fever, cholera etc. • Limit physical contact with people during epidemic and pandemic – keep safe distance, do not kiss or touch. • Use protective equipment as recommended (e.g. masks, gloves etc.). • Participate in vaccination campaigns as recommended (e.g. cholera, measles, etc.).
Know where and how to report or seek medical attention	• Get to know nearest health centres. During an epidemic or pandemic, health officials will identify specific health centres to provide care. • Learn emergency telephone numbers and procedures for accessing health services.
Take care of yourself and family members	• Maintain good personal hygiene. • Build up your immunity with a good diet, regular exercise and adequate rest. • Reduce stress and avoid smoking. • Wear a facemask when in close proximity to someone who is ill or may be contagious. • If you show symptoms, stay at home.
Promptly take appropriate action when you think that you or a family member might have been infected or exposed	• Self-monitor and check for symptoms every day. • Call for medical assistance or report to the nearest or designated health facility promptly, if you experience symptoms. • Manage fever by cooling the body down, and drinking lots of fluids. • Respect the prescribed isolation or quarantine period and procedures.
Take immediate action if you have been accidentally exposed to blood or body fluids from a person who might be infected	• Beware that some viruses can be transmitted via blood and body fluids through cut skin, cutaneous mucus, or a needle prick. Take immediate action if exposed. • Apply disinfectant when appropriate. • Report the incident to a specialist or health facility for appropriate care. • Wash the exposed area thoroughly with water and soap (if exposed, irrigate the eyes with water).

Seek medical attention for anyone who cannot be treated at home	• If someone needs medical care and cannot be treated at home, go to the nearest health clinic or hospital to get help.

Use personal protection equipment when caring for sick people	• Personal protection equipment includes:
	  ◦ masks
	  ◦ protective glasses or goggles
	  ◦ gloves
	  ◦ apron
	  ◦ soap or alcohol-based disinfectant, for washing hands.

Clean and disinfect surfaces during home care or when in isolation	• Do not share bedding, towels, and clothing with sick people. Use gloves when handling soiled laundry from the sick. • Surfaces touched or soiled by the patient, or his/her body fluids should be cleaned and disinfected with a household detergent. Wear utility gloves when cleaning.
Ensure appropriate sanitation and shelter conditions	• Avoid crowed areas to reduce the risk of contamination. • Separate sick household members from others at home to minimize the risk of spreading the disease. • Use proper and clean toilets to prevent illness and disease. • Bathe often, using clean water and soap or clean sand. • Ensure good ventilation (opening windows and doors to let fresh air in).
Stay hydrated and treat dehydration and diarrhoea	• Prepare oral rehydration solution to treat dehydration and diarrhoea. (Recipe: 1 litre water, 6 level teaspoons sugar, and half level teaspoon salt or drink coconut water).

Get emergency supply kit and/or stock ready	• In addition to regular first aid kit, keep stock of:
	  ◦ antipyretics
	  ◦ oral rehydration salts or coconut water
	  ◦ disinfection solution or household bleach
	  ◦ protective equipment like gloves and masks
	  ◦ chlorine or water treatment tablets
	  ◦ hand sanitizer.

Stockpile food and essential medicines	• If there is a possibility that there will be limited or no access to food and water, prepare a two-week supply for your household.
	• Assess the food insecurity level, and make your needs known within and beyond your community:
	  ◦ 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 livelihood insecure – without a sustainable income, and unable to access and/or afford enough food. This is the most vulnerable level.

Seek veterinary attention for animals that require treatment	• Make a list of the veterinarians in your area.
Share your knowledge with others	• To avoid the spread of diseases and epidemics teach others how to take care of themselves and maintain healthy practices.

EARTHQUAKES

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

An earthquake is a sudden, rapid shaking of the ground caused by the shifting of rocks beneath the earth's surface or by volcanic or magmatic activity in the earth. Earthquakes strike suddenly, without warning, and can occur at any time of the year – day or night. Earthquakes can lead to death, injuries and property damage, loss of shelter and livelihood, disruption of critical or lifeline infrastructure, and destroy communities.

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.

Each year there are about 15 major earthquakes, 135 strong earthquakes and more than 1,000 moderate earthquakes. However only 70–75 of these are reported to cause damage. Their impacts differ widely and depend on resilience and preparedness. 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.

Tsunamis are usually associated with earthquakes, but volcanic eruptions or underwater landslides can also generate them. The precautions highlighted here apply regardless of the cause..

Assess and plan

Key messages	Context-specific details
Identify safest places	• Identify the safest places in the building, and in each room. These places must be located away from exterior walls, unsecured partition walls, windows, glass and large or heavy objects that can fall, slide or collide, or objects such as heaters and open fireplaces that can cause fire. • Outside your building, the safest places are away from overhead and underground hazards.
Identify items that may cause death or injury and work out how to secure these	• Identify items within the building and around the perimeter that could fall, slide or collide during an earthquake. Move or find the best ways to secure these. • Move or secure objects that may fall and block exits.
Do not be misled by misinformation, myths or rumours	• Base safety information on the available scientific evidence. Do not spread rumours or unfounded myths about causes or effects of hazards. Many popular anecdotes are not supported by scientific data.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Select a safe site for your building	• Find out from local authorities where earthquake risks are highest in your area. • Locate buildings on stable, solid, dry ground (in other words, on deep and unbroken rock known as bedrock). Avoid adjacent hazards by leaving sufficient space between buildings so that they cannot pound against each other during an earthquake. • Avoid building on unstable slopes or sites subject to liquefaction, avalanches or inundation from tsunami, flooding or dam failure. • Avoid building directly on top of, or within 15 meters (50 feet) of known earthquake faults.

Build and maintain your building with earthquakes in mind	• Whether a building can withstand earthquakes depends on the ground it sits on, its shape, and the design of the structure, the materials it is built with, and construction detailing. Ideally, it should be strong but flexible, so that it does not fail when shaken.
	• Follow these principles for seismic-resistant construction:
	  ◦ Rigorously follow anti-seismic building codes.
	  ◦ Select an appropriate foundation system for the topography, soil conditions and construction type.
	  ◦ Select a simply symmetrical shape for the building (usually a simple rectangle).
	  ◦ Ensure 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 the building periodically.

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 can 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 these. 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 that consequently saves lives.

When making improvements, maintain the structural integrity of your building	• Make improvements that follow local building codes, in consultation with a qualified engineer. • If you make structural changes, take care not to remove or damage any part of the load-bearing elements of the building (the columns, beams or walls). This can weaken the structure and impact everyone in the building.

Secure your belongings	• 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 can block exit pathways. Secure anything that can fall on people while they are sleeping.
	  ◦ Secure water heaters, gas cylinders, outside fuel tanks and other 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.
	  ◦ Secure fire extinguishers.
	  ◦ Move beds away from windows.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Practise earthquake drills in different locations	• Practise earthquake drills, both physically and as thought exercises, in different locations. Consider the impact of strong shaking, identify the safest actions in each place (at home, work and school).
Take immediate action	• Trust your senses. Assume that the first shaking you feel is an earthquake. • Move away from windows, glass and exterior walls and unstable and heavy objects. • Extinguish all flames. • If you are near an exit door, open it a little so that in the event of a mishap, the door does not get stuck.

If you are indoors, drop to your knees, cover your head and neck, and hold on to your cover	• Drop down on your knees. Cover your head and neck, and protect your face. Hold on to or move in this position, until the shaking stops. Do not attempt to run.
	• *Drop, cover and hold on*. This is shorthand for several positions to take during an earthquake. These positions protect you from the worst and most-common injuries, by protecting your head, neck and throat. Pulling in your hands, arms, feet and legs places you in position, ready to crawl to a safer location.
	  ◦ 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.

Remain calm	• Stay calm by counting or taking slow, deep breaths. Look around to assess the situation before moving.
If you are on the ground floor of an adobe house with a heavy roof, exit quickly	• If you are indoors, on the ground floor of a house with a heavy roof, and if you can get outside to a clear space, then exit quickly and carefully as soon as you feel the shaking. *Drop, cover and hold on*, away from the building and any overhead hazards. • **Note:** This is the only exception to the rule to stay indoors until the shaking has stopped, as lightweight roofs pose little danger.
If you are outdoors, find a clear spot and drop to your knees to prevent falling	• If you are outside, find a clear spot away from overhead hazards such as buildings, trees, streetlights, power lines, overpasses, underpasses or above ground gas lines. Drop to the ground and stay there until the shaking stops. Stay outside and remain in open areas away from hazards.
If you are in a multi-storey building, be careful both during and after the shaking	• After the shaking stops, check for the safety of stairs or exterior fire escapes, before using them. • Do not use elevators under any circumstances.
If you are in a vehicle, go to a clear location and pull over	• Stop the vehicle in a safe place. Stay in the vehicle until the shaking stops. Avoid bridges, trees, power lines, poles, street signs, overpasses, underpasses, tunnels and other overhead or ground-level hazards. • Once the shaking has stopped, proceed with caution. Avoid bridges, elevated roadways, ramps and tunnels that might have been damaged by the earthquake.
After the initial shaking stops, expect aftershocks	• Aftershocks will be frequent during the first hours and days after an earthquake, and will gradually diminish in frequency and intensity. However, unusually large aftershocks may occur days or even weeks after the main earthquake. Aftershocks can trigger additional building damage or collapse. • Follow the same guidance for an aftershock as you would for any earthquake.

After the main shaking stops, if you are indoors, move cautiously and evacuate the building	• Put on sturdy shoes before you move around. If it is dark, use a torch or flashlight. Move to your pre-determined meeting place either inside the building or outside, away from buildings. Notice any damage as you exit. • If you feel strong shaking, exit the building following the standard building evacuation rules: *Do not run. Do not talk. Do not 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 the 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 qualified engineers have inspected it.
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 cabinets 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 flames and put out small fires	• Fire is a common hazard following earthquakes. In areas with wooden construction, fires following an earthquake can cause more damage than the earthquake itself. Check for small fires and extinguish any that you find.
If you are in a coastal area or near a tributary, move away from water to higher ground	• If you are in a coastal area and there is an earthquake, *drop, cover and hold on*. When the shaking stops, move quickly away from the coast or tributaries, to higher ground, avoiding buildings, bridges and downed power lines. Take your animals with you, if you can. If you cannot get inland, go up to higher floors of the strongest buildings available. Do not return to the shore, as waves may continue to arrive for hours. • The earthquake can cause a tsunami soon afterwards or some hours later. If there is a tsunami watch, stay informed by radio. If a tsunami warning is issued, be ready to evacuate. • If you are near the coast and feel a strong earthquake that lasts 20 seconds or longer, or if you see receding waters at the shoreline, you may only have minutes until a tsunami arrives. Do not wait for an official tsunami warning. Most tsunamis have two or three large waves, and may be tens of minutes apart. • If you are on a boat or ship at sea, do not return to port. If you are in shallow water, move to deep water if you have time. If you are in deep water stay there. Contact the harbour authorities to report any large waves near to the shore, before you return to harbour.

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.

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.
Look for and prevent fire hazards	• Extinguish all flames immediately. • Do not light any match, candle, lighter, flame or cigarette until you are sure there is no danger of a gas leak. • Check for gas leaks and turn off any gas connections. If there is any doubt, shut off main connections. • Do not use any electrical switch, appliance or phone if there is danger of a gas leak. Evacuate immediately if you hear or smell gas and cannot immediately locate the source and shut it off. • Remember that natural gas rises and can escape through windows and doors, but that liquefied propane, kerosene and carbon monoxide gases sink, and can be trapped on lower floors. • Stay away from downed power lines. Do not touch wires that are lying on the ground or hanging, or any objects touching them. • Shut off power at the main electrical switch if you suspect any damage to household electrical wiring. • Do not refuel or operate generators indoors. Take care when handling flammable fuel.

LANDSLIDE AND DEBRIS FLOWS

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

A landslide or landslip refers to a wide range of ground movement, such as rock falls, deep failure of slopes and shallow debris flows. The action of gravity is the primary driving force though other contributing factors are rainfall, earthquakes, volcanic eruptions, groundwater pressure, erosion, destabilization of slopes as a result of deforestation, cultivation and construction, snow and glacial melt.

Debris flow or mudflow is a fast-moving mass of loose mud, sand, soil, rock, water and air that moves downhill due to gravity. Preconditions for debris flow are: very steep slopes, a lot of loose debris and water, and little vegetation. In very steep areas, debris flow can reach speeds of over 160 kilometres per hour (100 miles per hour). The speed and volume of flow make these very dangerous.

Assess and plan

Key messages	Context-specific details
Learn about local history of landslides	• Familiarize yourself with slopes where debris flows have occurred in the past, as it is likely that this can happen again.

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. For example,
	  ◦ on existing old landslides
	  ◦ on or at the base of slopes
	  ◦ in or at the base of minor drainage hollows
	  ◦ 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
	  ◦ developed hillsides where leach field septic systems are used.
	• Be aware of areas that are less prone to landslides. For example,
	  ◦ on hard, non-jointed bedrock that has not moved in the past
	  ◦ on relatively flat-lying areas away from sudden changes in slope angle
	  ◦ at the top or along the nose of ridges, set back from the tops of slopes.
	• Regularly inspect and observe changes in the natural landscape (your property and surroundings) and watch for signs of slope movement. This includes:
	  ◦ 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 turbidity (muddy)
	  ◦ sudden decrease in creek water levels though rain is still falling or just recently stopped
	  ◦ muddy waters
	  ◦ 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 snow, ice or rock
	  ◦ blockages and water build-up behind retaining walls.

Learn and be alert early warning signs from transportation and underground utilities	• Regularly inspect and observe changes in local infrastructure landscape, such as,
	  • slowly developing, widening cracks or new bulges on the ground or on paved areas
	  • underground utility line breaks (e.g. water)
	  • collapsed pavement, mud, fallen rocks, and other indications of possible debris flow can be seen when driving
	  • sunken or down-dropped roadbeds.

Learn and be alert to early warning signs in the built environment	• Regularly inspect and observe changes to the buildings where you live, work and play in. For example,
	  • doors or windows stick or jam
	  • fences, retaining walls, utility poles, or trees tilt or move
	  • visible open spaces indicating jambs and frames out of plumb
	  • new cracks in plaster, tile, brick or foundation
	  • outside walls, walks, or stairs begin pulling away from the building
	  • soil moving away from the foundation
	  • ancillary structures such as decks and patios tilting and/or moving relative to the main house.

Learn and participate in the early warning systems	• Develop and use programmes for reporting local conditions to the authorities. • Be aware that landslides can occur progressively, often some time (hours or days) after a triggering event (e.g. rainstorm or earthquake).
Stay informed about the weather	• Monitor the amount of rain during intense storms. • Be aware of heavy rainfall. More than three to four inches of rain per day, or half an inch per hour, may trigger mudslides. • In mountainous areas, stay away from rivers and gorges during rain. • Short bursts of heavy rain may be particularly dangerous, especially after longer periods of wet weather.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Keep the drainage systems clear	• Keep storm water drainage systems free of dirt, leaves, and debris so that water can flow freely when it rains. • Keep gutters, downpipes and drains clean. • Trim back or remove vegetation blocking drains and gutters.
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 an expert, a soil engineer or engineering geologist. • Get a ground assessment of your property and out buildings, including animal shelters.
Seek expert advice about preventative measures	• Consult with experts to minimize potential impacts of landslides. For example, seek advice from a soil engineer or engineering geologist from the university department of geology.
Follow proper land-use procedures	• Avoid building on steep slopes, close to mountain edges, near drainage ways, along natural erosion valleys, at the mouth of steep ravines.
Protect your property	• Plant ground cover on slopes. • Built retaining walls. • Build channels or deflection walls to direct flow around buildings (but do not cause problems for others). • Have flexible pipefittings installed to avoid gas or water leaks.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Implement protection measures during times of high risk	• Board up windows and doors. • Place sandbags to divert water flow.
Stay awake and informed during heavy rainfall	• Monitor rainfall. • Listen to radio or check online for warnings of heavy rainfall.

During a landslide: listen and be alert to signs of imminent threat	• Be alert to unusual sights and sounds, such as,
	  ◦ faint rumbling sound that increases in volume
	  ◦ ground slopping downward in one direction and that 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 especially alert while driving. Watch for collapsed pavement, mud and fallen rocks.

During a landslide: get out of the landslide path	• If you learn or suspect that a landslide is occurring or about to happen, evacuate immediately.
	• If you suspect imminent danger:
	  ◦ move away from the path of the landslide
	  ◦ inform your neighbours
	  ◦ contact local officials.

During a landslide: protect livestock and pets	• Bring pets indoors and stay in control. • If you evacuate, take your pets with you. • Consider precautionary evacuation of livestock if you believe there is a risk of landslide. • Ensure livestock are in safe paddocks during heavy rain.

During a landslide: if you cannot evacuate, protect yourself	• When you are inside:
	  • if escape is not possible, curl up into a tight ball and protect your head.
	• If you are outside:
	  • move away from the path of the landslide
	  • go 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 since you may be at risk of drowning
	  • avoid river valleys and low-lying areas
	  • and you arrive at a flooded area, turn around and take another direction
	  • and your car stops, leave it and try to immediately reach the highest spot that you can find.

After a landslide: check for hazards	• Stay away from the 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. • Watch for flooding. • Report broken utility lines and other potential hazards to local authorities. • Check your home's foundation, chimney, and surrounding land for damage.
After a landslide take the following measures	• Replant damaged ground to prevent further erosion. • Seek expert help for reducing risks.
Keep supplies to protect your home	• Keep supplies such as hammer, nails, plywood, sand, sandbags and shovel.

TSUNAMI AND STORM SURGE

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

A tsunami is a sea wave of local or distant origin that results from large-scale seafloor displacements associated with strong earthquakes, major submarine slides, or exploding volcanic islands.

A tsunami can strike any coast at any time and we cannot predict exactly when or where they will occur. Undersea earthquakes most often cause tsunamis but submarine landslides or volcanic eruptions can also cause them. A tsunami can move as fast as a jet plane across the Open Ocean and can hit land with waves as high as 20 metres or more. The water may wash inland for several kilometres in flat lying areas, and can move up streams and rivers, destroying everything in its path. Waves may continue to strike the shoreline for many hours, and dangerous currents can continue for days following the event.

Since the devastating Sumatra earthquake and Indian Ocean tsunami of December 2004, it has been recognized that there is risk of tsunami along all coastlines. Due to its devastating impacts, exemplifying the tremendous fatalities and losses, tsunamis are now part of many risk reduction programmes. With more than 220,000 fatalities, the Indian Ocean tsunami was one of the deadliest disasters triggered by a natural hazard.

Although a tsunami cannot be prevented, its impact can be lessened when communities understand the risks, receive timely warnings and know how to respond.

Assess and plan

Key messages	Context-specific details
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 inundation. • Learn about the history of tsunami, coastal inundation and king tides, and about the impacts of climate change related to these risks in your area.
Make your tsunami evacuation plans	• Identify higher ground (if possible 30 meters, i.e. 100 feet above sea level or 3 kilometres, i.e. 2 meters inland) and the routes to get there. • Identify tsunami-safe shelters or structures in your community. • Know the tsunami evacuation zone and routes for your area. Display maps wherever helpful. • Post and observe evacuation route signs. • Plan to evacuate on foot, bicycle and vehicle where possible. (If you live in a community with lots of people and vehicles, consider evacuating on foot immediately after the strong shaking stops.) • Plan to evacuate pets and livestock.

If you feel a long or strong earthquake or see a rapid rise or fall of coastal waters move inland or to higher ground, immediately – these are warning signs	• Natural warning signs are:
	  ◦ Strong earthquake shaking for 30 seconds or more means immediate, high tsunami risk from near-field earthquake (no time for official warning). Move to higher ground immediately.
	  ◦ Long moderate or weak earthquake shaking that lasts for 40 seconds or more means high local tsunami risk from mid-field earthquake (official warning time may be very short). Move to higher ground immediately.
	  ◦ Rapid rise or fall in coastal waters
	  ◦ Coastal water making unusual noise (like approaching train, plane or whistling)

Learn and be ready to act on official tsunami advisory and alert system	• Official tsunami advisory and alert system includes:
	  ◦ international tsunami warning
	  ◦ regional tsunami warning
	  ◦ local tsunami warning
	  ◦ *all clear* means danger has passed, you may return home

Work with schools in tsunami risk areas to plan evacuation routes	• If school is in an identified tsunami risk area, ensure and learn the schools' evacuation routes, and practice evacuation drills. • Be sure that schools plan for automatic evacuation in response to natural warning signs. • Make plans for *safe family reunification* after the *all clear* is given.
Know when it is safe to return	• If there has been an official warning, there will be an official *all clear* message by radio or SMS issued by the authorities or an official agency. • If there has been no official warning, you may return after two hours, if there has been no impact.
Consider and plan for evacuation needs of all household members	• Plan for evacuation needs of small children, elderly people, those with disabilities and pets.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Seek expert advice before construction	• If you are building in a coastal area, ask local authorities about the likelihood of tsunami and coastal inundation (including the effects of climate change). • If you build in a coastal zone, follow construction practices to make structures less vulnerable to strong surges. Clearly post evacuation instructions and plan and keep evacuation routes clear.
Protect your home, farm and livestock	• Follow and promote proper land-use planning. • Seek information from local authorities to mitigate potential coastal inundation damage. • If long-range warning time permits, secure unanchored objects.
Prepare evacuation routes and *safe havens*	• Identify *safe havens* and prepare safe routes for yourself and your family, pets and service animals and livestock. • Practice evacuation at least once a year.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Respond to natural warning signs and do not wait for alert: In case of a very strong or very long earthquake, move quickly to higher ground or as far inland as possible	• During strong, moderate, and weak earthquakes follow *drop, cover and hold on* and count the number of seconds of shaking (e.g. say '1–1,000, 2–1,000, 3–1,000' to count each second passing). • If it difficult to stand up due to the strong shaking of the ground that lasts for 20 seconds, or if moderate or weak shaking lasts for 40 seconds or more, evacuate immediately. • Evacuate to higher ground 30 meters above sea level or 3 kilometres inland. Follow posted evacuation routes, where present. • If there are any official tsunami evacuation structures nearby, proceed there immediately. • If you cannot evacuate to higher ground, move to the third floor or above, go to the roof, climb up a tree, or grab a floating object. • Do not stop to collect animals unless they are easy to get to and will not delay you or inhibit your own safety. • Do not try to reunite until you reach the *safe haven*, or after until after the *all clear* is issued. • Avoid hazards caused by earthquake damage.
Follow instructions for tsunami advisory or alert	• In case of an international tsunami warning, listen to the radio, television and heed to local warnings and prepare to evacuate. • In case of a regional tsunami warning, help vulnerable members of household to evacuate as quickly as possible. • Share warnings in your community and follow instructions for evacuation. • If time permits secure unanchored objects outside.
Practice tsunami evacuation drills	• Practice community-wide tsunami evacuation drills from work, school and home, following evacuation routes to *safe haven*, and waiting for the *all clear* signal. • Include animals and livestock in drills, where possible.
Protect livestock and pets	• Consider precautionary evacuation of your animals to higher ground.

Stay away from the coast, tidal estuaries, rivers and streams	• In the event that you can see the wave coming, you are too close to outrun it. • Tsunamis can travel quickly up rivers, streams and estuaries.
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 100 meters. • A combination of loose mooring and loose anchorage reduces risk of boats drifting onto land. • Do not return to land or port until an *all clear* has been issued.
Stay out of danger until an official *all clear* message is received	• Follow family reunification plans after the *all clear* message is received. • Return home only after official message is received.

Be aware of and minimize secondary hazards	• Beware of secondary hazards such as contaminated water, damaged roads, landslides and mudflows among others.
	• Check your water supply since it may have been contaminated. Avoid use of contaminated water.
	• Avoid tsunami impacted areas and debris in the water.
	• To minimize risk of fire, electrical and hazardous materials release:
	  ◦ turn off gas in case of leaks
	  ◦ turn off electricity in case of inundation or damage.
	• Stay out of buildings that have water around it since these may sink or collapse.
	• Strong aftershocks or secondary earthquakes can trigger another tsunami. If the ground shakes again for more than 20 seconds, follow the same evacuation procedures.
	• Watch out for wild animals, especially poisonous snakes in water. Use a stick to poke through debris ahead of you.

VOLCANIC ERUPTIONS

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

A volcanic eruption is marked by the discharge (aerially explosive) of fragmentary ejecta, lava and gases from a volcanic vent. 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, although some occur in the middle of plates due to volcanic hotspots activity. The Hawaiian volcanic islands are one such example. Volcanoes provide a number of environmental benefits, for example: fertile soils, hydrothermal energy, precious minerals and tourism. However, they also pose several hazards: volcanic ash, gases, lahars, landslides, lava flows, and pyroclastic flows.

All volcanic activity like rock fall, ash fall, lava streams, gases etc. are described both as the transport of magma and/or gases to the earth's surface, which can be accompanied by tremors and eruptions, and the interaction of magma and water (e.g. groundwater, crater lakes) underneath the earth's surface, which can result in phreatic eruptions. Depending on the composition of the magma eruptions can be explosive and effusive and result in variations of rock fall, ash fall, lava streams, pyroclastic flows, emission of gases etc.

Ash fall: Volcanic ash is a fine component of tephra, comprised of particles more than 2 millimetres in diameter that spread over broad areas during an eruption. Ash particles can be hard, abrasive and mildly corrosive; they may conduct electricity when wet and do not dissolve in water. Ash can generate thunder and lightning due to friction in the eruption column. Freshly fallen ash can have an acidic coating that irritates eyes and lungs, may pollute local water supplies and damage vegetation. It can quickly build up on roofs causing them to collapse and can damage critical lifelines such as power cables. Ash fall can reduce visibility, and make roads very slippery and impassable. Depending on the thickness of the deposit, over time ash can be incorporated into fertile topsoil in volcanic regions.

Lahars (mud or debris flows): These are hot or cold mixture of water and volcanic debris flowing down the slopes of a volcano, often in a river valley. When moving, they act like a mass of wet concrete carrying rock debris and even boulders up to 10 meters in diameter. Lahars vary in size and speed. These may be a few meters wide and several centimetres deep or hundreds of meters wide and tens of meters deep. Depending on water and sediment concentration and slope, they may flow a few meters per second or several tens of meters per second – much too fast for people to outrun. By eroding rock debris and absorbing additional water, lahars can easily grow to more than ten times their initial size. Lahars almost always occur on or near stratovolcanoes since these tend to have explosive eruptions that produce loose material.

Lava flows: Lava flows are streams of molten rock that pour or ooze from an erupting vent. Lava flows knock over, bury or burn everything in their path. Most extend less than 8 kilometres from their source and travel slowly. As a result, people have enough time to move out of its path. Fluid basalt flows can extend tens of kilometres and travel 1 kilometre per hour on gentle slopes and up to 10 kilometres per hour on steep slopes. When confined within a channel, they can reach velocities of more than 30 kilometres per hour. Land buried by lava flows must be heavily worked if it is to be used again.

Pyroclastic flows and surges: These are high-density mixtures of hot, dry rock fragments and gases that move away from the vent at high speeds. Pyroclastic flows consist of a basal layer of coarse fragments that moves along the ground and a more buoyant upper layer. They generally follow valleys or other low-lying areas and can deposit layers ranging from less than 1 meter to more than 200 meters. 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 kilometres per hour, pyroclastic flows knock down, shatter, bury or carry away nearly all objects and structures in their way. The overlying turbulent surge can rise out of low- lying areas, often traveling well beyond the main portion of the flow. This can happen unexpectedly. The extreme temperatures of the gases within the pyroclastic flow (200 degrees Celsius to 700 degrees Celsius) can cause combustion: especially of 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.

Tephra: Fragments of volcanic rock, less than 2 millimetres to more than 1 meter in diameter, that blast into the air during an explosive eruption.

Volcanic gases: Gases released from a volcano include steam, carbon dioxide, sulphur dioxide, hydrogen chloride and hydrogen fluoride. These are emitted during an eruption but may also escape continuously from soil, volcanic vents, fumaroles, and hydrothermal systems. Sulphur dioxide can lead to acid rain locally, and air pollution downwind. Gases released into the stratosphere can lower surface temperatures and contribute to depletion of the earth's ozone layer. Carbon dioxide, heavier than air, can flow into low-lying areas and collect in soil, becoming lethal for people, animals and the vegetation. Fluorine particles concentrated in fine-grained ash can be harmful when ingested by animals.

Assess and plan

Key messages	Context-specific details

Learn your volcano risks and warning signs	• Recognize unusual physical changes around volcanoes and report them to relevant authorities. This includes:
	  ◦ ash fall or increased ash fall
	  ◦ vegetation drying up
	  ◦ rumbling sounds or increased noise
	  ◦ earthquakes
	  ◦ landslides
	  ◦ increased foul smells from the volcano
	  ◦ any other changes that are out of the ordinary.

Learn and participate in early warning systems	• Become familiar with the volcano hazard map and danger zones. Know the risks surrounding your home, place of work or school and other important locations that you visit. • Get volcano bulletins and alerts from your local authorities. • Learn about your community's early warning systems and emergency plans. Different communities have different ways of providing warnings and different response plans.
Develop plans for evacuation and *shelter-in-place*	• Develop an evacuation plan in case of a volcanic eruption and make sure all members of your household know and practice it.
Work with schools in volcano risk areas	• Support schools in making plans for volcanic eruption evacuation, sheltering-in-place, and family reunification.
Be aware of secondary hazards associated with a volcanic eruption	• Volcanic eruptions can cause earthquakes, flash floods, landslides, lahars (mudflows), thunderstorms and tsunami. • The danger of lahars increases near stream channels and with prolonged heavy rains. Do not cross in front of a lahar and inform others of the danger.

Keep volcanic ash out of buildings	• Ensure the building is suitable and that the roof will not collapse easily from ash build-up. • During volcanic eruption, stay in doors to avoid unnecessary exposure to ash. • Monitor the build-up of ash on roofs and exit the building if there is a threat of collapse. • Remove ash with extreme caution (it is slippery and can be heavy). • Place damp towels at door thresholds and other sources of inundation. • Remove outdoor clothing before entering clean areas.
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 the ground. • If you use rainwater collection system disconnect the tank prior to ash fall.
Protect machinery and equipment from volcanic ash	• Protect sensitive electronics (e.g. by wrapping with plastic). • Place machinery indoors to protect from volcanic ash or cover with large tarps.
Protect your pets and livestock from volcanic ash	• Evacuate livestock early to paddocks that are elevated and up wind from the volcano. • Bring pets and livestock into closed shelters to protect them from breathing and consuming volcanic ash. • Cover stock feed to avoid consumption of ash. • Ensure that animals have access to clean food and water.
Protect your lungs and eyes from ash fall, during and after the eruption	• Stay indoors and away from volcanic ash fall areas if possible since the fine, glassy pieces of ash can increase health risks for children and people with chronic respiratory conditions. • If outside, seek shelter in a building or vehicle. • Wear goggles to protect your eyes. Those who use contact lens should remove them and wear glasses to prevent corneal abrasion. • Wear masks to protect against lung irritation from small particles. If masks are unavailable use a (damp) handkerchief or cloth over your nose and mouth. • Close windows, doors and other vents, and switch off fans and air conditioners if possible to minimize ash from coming indoors. • Protect your skin. Keep as much of your skin covered as possible by wearing long sleeve clothing and long pants). • Avoid low-lying areas downwind of volcano and river valleys downstream.
Limit driving	• If in a vehicle, keep doors and windows closed. • Drive slowly maintaining a significant distance between vehicles to avoid stirring up ash.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Follow instructions to evacuate or take shelter	• Follow evacuation instructions issued by authorities. The surroundings may seem safe to you but in fact it 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. If the ash fall is heavy, do not remain in a building that has a low-pitched or flat roof.
Avoid driving during and after ash fall	• Driving during ash fall is especially dangerous due to low visibility. • After ash fall, do not drive unless absolutely necessary, as roads can be slippery. • Volcanic ash abrasion can damage parts of vehicles, including bearings, brakes and transmissions. Filters may need to be changed regularly. • If you must drive, drive very slowly and with lights on.
Protect your lungs and eyes during clean-up	• Put on goggles and an effective mask before starting to clean (refer to the International Volcanic Health Hazard Network for further information: www.ivhhn.org). • If you do not have a mask, use a wet cloth.
Clean up carefully outside	• The removal of ash fall from roofs should only be done if it is safe to do so. Rooftops may be slippery when covered in ash or at risk of collapse if at the limit of their load capacity. Be cautious when climbing on ladders and roofs. • Sweep out gutters, if safe. • Use shovels for removing thick deposits (more than 1 centimetre) and stiff brooms to remove lesser amounts. • Dampen but do not soak ash before removing by shovelling or sweeping, to reduce breathing in particles. • Keep roofs free of thick accumulation of heavy wet ash. Most roofs cannot support more than 10 centimetres or 4 inches of wet ash. • Place ash in heavy-duty plastic trash bags. Keep ash separate from normal rubbish. Follow official instructions for disposal. • Do not dump ash in gardens or on the roadside unless advised to do so. • Do not wash the ash into the guttering, sewers, effluent ponds or storm drains since this can damage wastewater treatment systems and clog pipes.

Clean up carefully inside	• Do not sweep or rub dry ash. Instead vacuum or dampen using water or detergent wetting agent, and dab with a damp rag. • Avoid excess rubbing action because sharp ash particles can damage textile fibres and hard surfaces. • Wash or beat textiles outdoors. • Unplug electronic equipment and clean with a vacuum cleaner. • Clean any surface that may blow air and recirculate the ash (stove fans and vents, refrigerator vents, air conditioner, furnace). • For several months after an ash fall, electrical filters may need replacing often.
Clean up your vehicle	• If driving is crucial, drive slowly, use headlights and ample windscreen fluid. Using wipers on dry ash may scratch the windscreen. In the event of heavy ash fall, driving should only be undertaken in an emergency. Use water bottles and a cloth to clean the windscreen as required. • Clean the vehicle, including the engine, radiator and other essential parts daily, if necessary. Use water to flush the ash.
Protect vulnerable people from dust exposure	• Keep children indoors. Explain what is happening and the precautions you are taking. • Do not permit children to play in ash piles. • 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 should stay inside and avoid unnecessary exposure to ash.
Protect your animals	• Keep animals indoors where possible. • Brush animals and wash paws, fur or skin to prevent them ingesting or inhaling ash while grooming themselves. • Use a filter to provide clean drinking water.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details

Store additional supplies for volcanic eruption response	• Additional supplies for volcanic eruption response include:
	  ◦ dust masks and eye protection
	  ◦ plastic wrap to protect electronics from ash
	  ◦ cleaning supplies.
	• Evacuation bag stored in the vehicle.
	• Always carry a flashlight, even during the day.

Store clean water and food	• Collect and store clean water in closed containers, in advance. (between 20 to 30 litres, i.e. 5 to 7 gallons per person in the household). • 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.

TROPICAL CYCLONES

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

Tropical cyclones are defined as an atmospheric closed low pressure circulation system rotating counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere (includes: cyclone, extra-tropical cyclone, tropical cyclone, hurricane, typhoon).

Tropical cyclones are relatively slow moving but severe forward-tracking storms with fast rotational winds of at least 65 knots (120–320 kilometres per hour or 74–200 miles per hour). They have an eye: a central calm area. The maximum sustained wind is experienced close to the eye-wall or outer edge of the cyclone.

These storms are referred to as:

- **cyclones** when these occur in Southeast Asian waters and the Indian Ocean
- **typhoons** when they occur in East Asian and Pacific waters
- **hurricanes** when they occur in the Atlantic, Gulf of Mexico or Caribbean Sea.

See also key messages for floods

Each type is associated with a particular season that can last as long as seven months each year.

Major hazards associated with tropical cyclones are: strong winds, which can destroy or seriously weaken structures, tear off roofs and topple power lines and trees; torrential rainfall, wind-driven water, powerful and destructive marine waves and storm surges, which cause mainly coastal flooding, but can also cause inland flooding of fresh and sea water via tributaries.

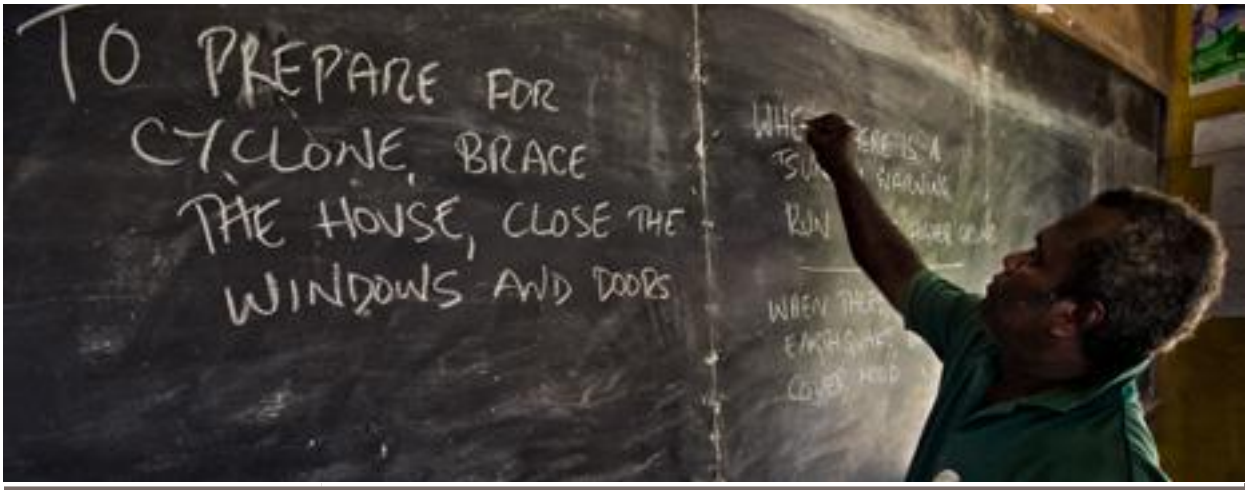
Cyclones can cause deaths (mostly flood-related, but also from electrocution and the impact of collapsing structures and blowing debris), serious property and infrastructure damage, severe erosion, destruction of standing crops and vegetation, instability of ground, deposits of mud, sand and gravel, 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.

Assess and plan

Key messages	Context-specific details
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).
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 local emergency manager 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.
Work with the community to identify local cyclone shelters	• Work with the community to identify safe local cyclone shelter locations for anyone who will need them. • Make sure each household member knows the location and route to the agreed shelter.
Work with the community and strategic place provisions of water and food	• Strategically place drinkable water, food, cooking equipment, and blankets. This can save lives. • Work with employers, school and community leaders and organizations to stockpile and store these provisions in safe places.
Store valuables up high	• Keep important papers in a waterproof bag, and store equipment, feedstock and other valuables in a location high above where potential floodwater can reach. Keep copies of important documents in another place, out of your area.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Build and maintain your home with severe tropical storms in mind	• Install permanent external storm shutters on windows and doors wherever possible, to protect these from flying debris. • Be sure that roofs are securely fastened to the frame structure. Minimize roof overhangs, as winds can catch and lift them. • Where possible, elevate furnaces, water heaters and electrical panels. • Install check valves in plumbing to prevent floodwater from backing up into drains. • Consider building a safe room, for tornado safety. Hurricanes and tropical storms provide ideal conditions to form tornadoes.
Inspect and repair your roof annually	• Inspect your roof at the beginning of the storm season and make repairs, such as fixing loose tiles, as needed. The roof is often the most vulnerable part of the house. Fix any loose tiles. • For wooden structures, brace the roof to the main structure and add hurricane straps to secure the roof. • For lightweight roofs, secure sandbags on top, to increase stability. • Clear rain gutters and downspouts, and fix any that are loose.
Keep trees and bushes well trimmed	• Where necessary, remove branches and small trees that may fall on the house. Remove or prune older trees, damaged branches and ornamental trees that will not be able to withstand strong winds. (In some cases, removing some branches allows wind to blow through large trees rather than toppling them.)



Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
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.

Stay informed	• Monitor the weather closely.
	• If you are advised to evacuate, or if you think you are in danger, evacuate immediately away from the storm's path.
	• Make sure you understand the difference between a watch and a warning in early warning weather reports:
	  ◦ **A watch** means there is a threat of cyclone, hurricane or typhoon conditions within 36 hours. This is the time to check your preparations.
	  ◦ **A warning** means that the conditions are expected within 24 hours or less.

Keep supplies to protect your home	• Keep supplies on hand to protect your home – for example, plywood, plastic sheeting, nails, a hammer and saw, a crow bar, sand, shovels, sandbags and washboards.
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, hurricane or typhoon watch	

Prepare your property for high winds and surge waters	• During a cyclone, hurricane or typhoon watch, you need to:
	  ◦ remove any debris or loose items, and bring anything indoors that is at risk of becoming a flying object
	  ◦ securely close permanent storm shutters or fix wood or other protective materials outside to protect windows from wind
	  ◦ prepare sandbags, flood washboards or plastic sheeting, to stop water getting in through doors, lower windows or vents.

Keep your pets and service animals indoors	• Bring your pets and service animals indoor well before the storm. • Maintain direct control of your pets and service animals, and take them with you if you evacuate.

Stay informed	• Listen to the radio or watch television for information. • Close storm shutters or board up windows from the outside. • Secure outdoor objects or bring them inside. • Fill bottles with drinking water, and bathtubs and any large containers with water for sanitation. • Check your personal supplies, including prescription medications. • Turn the refrigerator thermostat to coldest setting and keep it closed.
Attend to utilities	• Turn off electricity, gas supply and water, if you are told to do so. • Disconnect any small appliances.
Prepare to evacuate	• Check that your evacuation supplies and your *go-bags* are ready, including water and high-energy food and emergency contact information. Wear rain boots if possible. Charge mobile phone batteries.
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. • Evacuate down to the second or third floor if you live in a high-rise building, as winds are much stronger at higher levels. • Evacuate to designated shelters based on prior planning. Evacuate if you feel you may be in danger but do not evacuate during the storm.
If you don't evacuate, *shelter-in-place*	• If you are not advised to evacuate, secure and brace all exterior doors and close all interior doors. Keep curtains and blinds closed. • Stay indoors, away from windows, skylights and doors. • If in a high-rise building, 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 deceptively calm and quiet. The storm is not over. If things seem calm, it is probably the lull at the centre of the storm, so maintain your secure position and do not go outside as the winds will get stronger again. • Be prepared for tornadoes. Hurricanes and tropical storms provide ideal conditions to form tornadoes.
If you are in a building	• Stay on lower floors but above basement and ground level since these may flood. In dense urban settings, the severity of winds increases at higher altitudes. The impact of any storm is far more severe at around the tenth floor and above.
Turn off utilities and gas tanks and unplug small appliances	• If you are instructed, or if you have time before evacuating, turn off all utilities and cooking or heating gas tanks. Unplug small appliances.
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.
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 related-hazards. • Practise good hygiene and avoid consuming potentially contaminated food or water.

FLOODS

*Please note that the foundation messages are included in the previous section: **Key messages for all-hazards household and family disaster planning**. Separate messages are also available for other specific hazards.*

Floods are described as the overflowing of the normal confines of a stream or other body of water, or the accumulation of water over areas that are not normally submerged. This includes: river/fluvial floods. They 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 melting of snow or ice, sudden release of water held or diverted by ice or debris jams and 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 (slow, developing over hours or days) and flash floods (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 occurs when water flowing from mountains towards the sea can collect in low or flattened areas, creating sheet-flooding run-off.
- **Coastal flooding** is inundation caused by seawater 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** takes place due to an unexpected dam or glacial breakage.
- **Urban flooding** can 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 to 6 meters or 10 to 20 feet, 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 to 15 kilometres per hour or 6 to 10 miles per hour, spreading as widely as the terrain permits.

Floods can cause 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.

Assess and plan

Key messages	Context-specific details
Know your area's flood risks	• Know the local terrain, water sources and catchment area and weather patterns, to better understand the risks. • If flood plains have been mapped, find out whether you are located on a flood plain, and learn about the measures required to elevate your property and buildings relative to predictable flood levels. • Consider risk factors such as proximity to rivers, dykes and coastlines, blockage of channels or gullies, and urban infrastructure. • Investigate historical experience and the potential impact of climate change on the area. • Speak with local authorities and neighbours to find out whether your area is prone to flooding and how flood risk is being addressed. • Maintain communication with neighbours located above and below you in a building. • Identify industrial activity that may create hazardous materials release and contamination risks during flooding.
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.
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.
Plan to protect your animals	• Consider precautionary evacuation of your livestock and pets.
Know your areas expected flood evacuation routes	• Identify your safe evacuation routes, using any forms of transportation available to you, as well as routes that can be used on foot.


Save the Children

Mitigate risks: physical or environmental

Key messages	Context-specific details
Select a safe site for your building	• Avoid building or living within 200 meters, i.e. 650 feet 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).
Build and maintain your home with floods in mind	• 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. • If you are advised to, for your specific conditions, install back-flow valves in plumbing to prevent floodwater from backing up into drains. • When you make renovations or alterations, wet-flood proof the construction. Choose flood damage-resistant materials for areas that usually get wet, raise electrical circuits 1.2 meters or 4 feet above the floor, put appliances on pedestals, and design walls so that cavities drain.
Maintain water channels	• If you change the natural course of a river or stream, make sure its water-carrying capacity is not reduced. • Keep water channels, drainpipes and gutters clear of debris.
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.
Construct barriers to prevent floodwater from entering buildings	• Construct levees, berms or floodwalls in accordance with local building regulations, to prevent floodwater from entering your building. • Identify the best methods to prevent water from entering your home, depending on your construction type and location. If possible, create a barrier in front of your doors and vents to keep water out. • Make sure you have the supplies and time available to implement your solution. 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 to abandon the fight and save your life. Know how to get out of the flooded area.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Practise evacuation routes	• Make sure household members know where to evacuate to, what route to take, and where to meet if they have to leave.
Stay informed: monitor weather, listen to the radio and follow instructions	• Monitor the weather closely. If there is a **flood watch**, this means a flood is possible in your area. If there is a **flood warning**, this means a flood is already occurring in your area, or will do soon. • If you are advised to evacuate, or if you think you are in danger, evacuate immediately. • If you are instructed, or if you have time before evacuating, disconnect heating and cooking or gas tanks and unplug electrical appliances.
Keep supplies to protect your home	• If you live in an area prone to flooding, keep supplies (such as plywood, plastic sheeting, nails, hammer, a saw, a crow bar, sand, shovels and sandbags), to protect your home.
Keep supplies to protect people from drowning and as floating transportation	• Buy or make personal float devices for each household member. • Keep a ladder and rope for escaping to the roof. • Keep an inflatable boat or make an improvised group-floating platform for example, with capped water bottles.
Bring your pets and service animal indoors	• Maintain direct control of your animals and take them with you if you evacuate.
When you hear a flood warning, store extra water	• Fill plastic bottles with clean water for drinking. • Fill bathtubs and sinks with water for all other cleaning and sanitation needs.

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.
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 15 centimetres or 6 inches deep can sweep a person off their feet. • Do not expect to outrun floodwater, as it may flow at 10 to 20 kilometres per hour, i.e. 6 to 12 miles per hour. • If you have not been able to evacuate out of the area move to higher ground or the uppermost floors of buildings.
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. • Do not drive around barricades: they are there for your safety. Turn around and find another route. • Stay away from underpasses, as the depth of water there is not obvious. Underpasses can fill with 1.5 to 2 meters or 5 to 6 feet of water. • 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. • As little as 20 centimetres or 6 inches of water can cause you to lose control of your vehicle. As little as 50 centimetres, i.e. 2 feet of rushing water can carry away most vehicles, including trucks. • If they become wet, test your brakes on a clear patch of road at low speed. If brakes are not working, 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.
After a flood, take care around floodwaters	• Stay away from low-lying areas. • Do not drink from, play or swim in floodwater. • Watch out for poisonous snakes – especially around trees and bushes. Use a stick to poke through debris. • Avoid touching electrical item that is wet or any water that is in contact with electrical wires.
After a flood, pump out floodwater from basements gradually	• Pump out flooded basements gradually (about one-third of the water per day) to avoid the basement walls collapsing due to pressure from water-saturated soil outside.
After a flood, start clearing out and drying your home when rain stops and water recedes	• Drying may take weeks, and complete restoration can take months. Sewage and toxic contamination is difficult to clean. • 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. • Turn on heaters when possible. • Wash and then disinfect every part of your home that has been flooded. Start from the bottom and work your way up. Work in a well-ventilated area with two buckets – one for the cleaning agent and one for rinse water. Replace rinse water frequently. Repeat after 8–24 hours to kill germs and reduce the odour. • Remove mildew.

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. • Disinfect any cuts and protect them with a waterproof dressing. • Keep children away during the clean-up. • Bury human waste matter quickly.

After a flood, clean up carefully	Follow the instructions below for cleaning specific items.
	• Paper and photographs:
	  ◦ To protect paper, rinse and freeze it or place it in a sealed container with moth crystals or stacked individually between sheets of wax paper and sealed in a plastic bag. Freezing slows the damage, and the paper can then be defrosted and dried later.
	  ◦ Place wet or frozen photos in cold clear water and separate them. Do not hold them under running water or wipe them. Dislodge dirt by moving gently in a tub.
	  ◦ Photocopy the items as soon as possible.
	  ◦ As soon as the pages are thawed or unsealed, dry them with a blow dryer or blotting paper.
	  ◦ Do not force pages apart – dry them until they come apart easily.
	  ◦ Seek professional help for rare and heritage books, photographs and stamp collections.
	• 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 in a washing machine 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 a professional checks the electrical system and appliances before turning power on and using them.
	  ◦ Clean appliances with clean drinkable water.
	  ◦ Check that sewer line is working before using toilet or the latrine.
	  ◦ Discard all food that has been in contact with floodwater.
	  ◦ 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 these.
	  ◦ Remove the backs of furniture to allow air to circulate.
	  ◦ Do not force open wooden drawers and doors: let them dry first.

HAILSTORMS

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

Hail is a form of solid rain consisting of balls or irregular lumps of ice, measuring between 5 millimetres or 15 centimetres in diameter. Hail formation requires strong, upward motion of air freezing temperatures at lower heights. Storms that produce hail that reaches the ground are known as hailstorms. Hailstorms normally last from a few minutes up to 15 minutes. Hail in the tropics occur mainly at higher elevations. It may be accompanied by other severe weather events, such as cyclones and tornadoes.

Hailstorms are a common, costly and potentially hazardous weather event that can cause injuries to people, and damage to buildings, vehicles and crops. Accumulating hail can cause loss of power and bring down trees. Hail damage to roofs may go unnoticed until leaks or cracks become obvious. Flash floods and mudslides within areas of steep terrain can be a concern with accumulating hail. Rarely, massive hailstones have been known to cause concussions or fatal head injuries.

Assess and plan

Key messages	Context-specific details
Monitor weather and watch for indicators of dangerous weather	• Listen to the radio or watch television for severe weather warnings. • Monitor weather conditions. Hail clouds often exhibit a characteristic green colouration. • Alert neighbours to indicators for dangerous weather conditions. • Stay alert for landslide or flood warnings.
Identify safest places	• Identify the safest places in your building, located away from exterior windows. • Outside a building, the safest places are covered areas away from steep sloping terrain or waterways. • Identify dangerous places with natural lightning rods such as tall isolated trees, hilltops, open fields, beaches, sheds or other small structures and anything metal.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Protect buildings and vehicles	• Keep rain gutters and down pipes clear and repair any damage. • Install permanent external storm shutters on windows and doors. • Park vehicles under shelter or cover windscreens and windows. • Trim dead wood from trees to reduce wind stress and damage from falling branches. • Move valuables away from windows.
Protect livestock and pets	• Provide covered shelter for animals and move livestock there, if necessary. • Bring pets indoors.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Be prepared to act in response to severe weather warning or conditions	• Follow evacuation instructions. • Stay near safe areas. • Keep children nearby. • Firmly close external shutters.

Store provisions for protecting your home	• Keep items needed to protect your home from water damage (plastic sheeting, duct tape, sandbags, sand etc.).
If you are outdoors, take shelter	• Seek shelter but avoid natural lightning rods such as a tall, isolated tree in an open area, hilltops, open fields, beaches, sheds or other small structures, and anything metal. • Face away from wind while you head to the nearest shelter. Use your arms, bag, books or any other object to cover your head. • Be alert for signs of high winds or tornado (especially if hail is large). • Move to a vehicle with a metal top.
If you are indoors, stay away from windows	• Stay away from windows and glass doors. Be alert for signs of high winds or tornado, especially if hail is large, and follow tornado precautions if necessary. • Stay indoors until the storm stops and you are sure it is safe to exit.
If you are in a vehicle, remain inside	• Stop the vehicle in a safe place. Stay in the vehicle until the storm stops. • Keep head and face away from windows and put your head down with arms over your head. • Be alert for signs of high winds or tornadoes, especially if hail is large, and follow tornado precautions if necessary.
Remain calm	• Stay calm by counting or taking slow, deep breaths. Look around to assess the situation before moving.

In mountainous areas, 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.
	• Be alert for hail-induced landslides.
	• If there is a landslide warning and a sudden burst of rain, evacuate immediately to an identified *safe haven*.
	• Watch for flooding and be alert when driving near embankments or along swollen waterways.

Check for damage	• Watch out for broken glass. • Inspect your roof and make repairs to avoid leaks and water damage during the next rainfall.

CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR HAZARDS

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

Chemical, biological, radiological and/or nuclear (CBRN) emergencies are accidents or deliberate acts involving CBRN hazards. The umbrella term CBRN is commonly used because there are distinct similarities between these hazards, making some of the emergency preparedness and response measures common or very similar for all of them.

Nuclear and radiological hazards are linked to ionizing radiation from radioactive sources – the ability of atoms to release ionizing radiation, which in sufficiently high doses is hazardous to humans and animals and has also an impact on the environment. Nuclear emergencies involve or emerge from nuclear chain reactions. Such chain reactions take place for instance in nuclear power plants and research reactors. Radiological emergencies can involve all other situations involving radioactive sources, for example, those used in radiological devices for medical, industrial or research applications.

Chemical emergencies can occur in a number of different situations where hazardous chemicals are released into the surroundings. Chemical agents are all chemical elements and compounds in a natural or processed state and their by-products. Exposure by inhalation, ingestion or to the skin may result in illness or injury to human health depending on the chemical substance, the amount of the dose and the duration of exposure. The standard terminology refers to industrial chemicals that are hazardous as toxic industrial chemicals (TICs); CBRN agents for deliberate release can be either TICS or chemical warfare agents (CWAs).

Biological agents include bacteria, viruses, fungi and parasites or parts thereof or products they generate. Exposure in sufficient quantities and over a given duration may result in illness or injury to human health, and this can happen through natural exposure or release (intentional or unintentional) of microorganisms from, for example, a research facility. As the key messages for CBRN emergencies focus on general characteristics common for these kinds of emergencies, more specific key messages related to biological hazards are elaborated under Major epidemic and pandemics diseases.

It is useful to note that the term CBRN emergencies is usually linked to the security related context. CBRN emergencies often fall under technological emergencies. In addition to encompassing CBRN events, this term includes other emergencies stemming from technological and industrial activities, such as dam ruptures, transport accidents and factory explosions, to name a few..

Assess and plan

Key messages	Context-specific details
Know the CBRN risks where you live, work and your children study and play	• Seek information about the location of sites where hazardous and toxic substances are stored or used and of nuclear facilities in your area. Be aware that research centres can also house CBRN agents. • Familiarize yourself with information given by the authorities, companies and facilities on what is considered safe distance to the facilities under regular circumstances. • Advocate with authorities and facilities to make information about hazardous material and the relevant safety measures for the public available to the population. • Be aware that safe zones change depending on kind of hazardous material and the degree of severity of the accident. Seek information about safe zones in advance.
Familiarize yourself with existing warning systems and preparedness plans in your area	• Depending on the event and on the product involved, you may need to stay at home, under confinement (refer to *shelter-in-place* under *Prepare to respond: develop skills and store provisions* of this section), or go to a safe zone. Get this information from authorities responsible for preparedness plans in your area. • Learn the public warning channels, for example, sirens, media and text messages among others in your community in case of a CBRN emergency. • Be aware of local and regional contingency plans for CBRN emergencies. This may be a part of general contingency plans and possible countermeasures that can be put in place by the authorities. • Know if and where there are shelters in your community that can protect you from different types of contamination. Depending on the distance to CBRN facilities, these shelters may require special air filters and special locations.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Know the symbols that CBRN agents should be marked with	• Make sure the entire family is aware of the symbols for the different CBRN hazards so that they understand that they should not attempt to touch any object or enter any facility carrying these symbols. • Keep household chemicals out of reach for children. • The most widely used symbol for radiological, biological and chemical hazards are:  • Be aware that different countries may use additional symbols.
Consider CBRN risks and multi-hazard effects when determining your living location	• Think about potential risk zones and proximity to industrial facilities with possible CBRN hazards when you move to a new place. • Consider the proximity to safe shelter or review the possibility of sheltering in the house in case of a CBRN emergency.
Familiarize yourself with potential evacuation routes	• Following guidance from the authorities. Relocations or evacuations may be necessary in certain situations. Familiarize yourself with potential routes and evacuation zones that are foreseen in the emergency plans. Consider that mass evacuations can cause considerable traffic disruptions or evacuation routes might be damaged due to a multi-hazard disaster like an earthquake or landslide. • Consider the preparation of a family *go-bag* (refer to *Key messages for all-hazards household and family disaster prevention* for further information).

Understand the nature and effects of CBRN hazards	• You may be able to see, smell or touch certain CBRN hazards, others can only be detected using special equipment. • Depending on the CBRN agent, exposure can take place through contact with skin, inhalation or ingestion. For radiological emergencies, irradiation can also happen if you are standing close to a radioactive source. • Depending on the source, the way in which exposure occurs and the degree of contamination, the impact on the body can range from minor to serious health effects or even to be lethal.
Understand where CBRN hazards can be found and how they can spread	• In addition to being stored or used in various facilities, CBRN agents are sometimes transported, and an emergency can therefore occur on road, rail or at sea. • Warning signs for the transport of hazardous goods include:  • There are different ways in which CBRN agents can spread. In emergencies these most commonly spread through air as light particles, aerosols, vapour or in liquid form like some of the chemical substances. Some CBRN agents can also be spread through touch or contact with body fluids. In larger emergencies, the area affected can be wider and even have cross border implications.
Nuclear and radiological emergencies	
Make sure you know were to get and have access to potassium iodide (KI) pills	• There is a range of protective actions authorities can and will consider to put in place to reduce and/or limit the impact on public health from nuclear and radiological emergencies. These can range from *shelter-in-place*, evacuation, relocation, and restrictions on foodstuff to intake of stable iodine. • Distribution channels of KI tablets can vary from country to country. If taken before being exposed to radiation, KI pills can help to protect against damage on the thyroid gland. • **Note:** KI is not a radiation antidote and is only effective against radioactive iodine that affects thyroid glands and can cause thyroid cancer. • Ensure you know where to get KI pills in case of emergency and who should take these and the required dosage. *This should only be administered when authorities instruct to do so, as there can be adverse effects if taken these without reason.* • KI pills should be taken before exposure to radioactive iodine to protect the thyroid gland from uptake of radioactive iodine. Children, pregnant and lactating women are most vulnerable to radioactive iodine exposure.

Chemical emergencies	
Leave household chemicals out of sight and reach of children and pets	• To prevent chemical accidents from taking place in your home, it is important that hazardous chemicals are out of sight and reach from children and pets. This is particularly relevant in the case of detergents and cleaning agents, as well as paint.
Make sure household chemicals are kept in original packaging and properly marked	• To prevent mishaps with household chemicals, everyone in the house must be able to see what these are and be able to read the instructions for use and potential warnings on the package. Chemicals should not be transferred to containers previously used for drinks or food to prevent its consumption by mistake.
Do not mix chemicals	• Some chemicals like chlorine can produce hazardous gases if mixed. Refrain from experimenting with this.
Always have easy access to important phone numbers	• Many countries have a special emergency number you can call in the case of poisoning or mishandling hazardous chemicals and materials. Memorize the number, store it on your mobile phone and/or display it in a visible place in your home together with other emergency numbers.
Ensure proper ventilation	• Ensure you open your windows every day: air pollution is higher indoors than outside. Ensure good ventilation through window opening if you are undertaking renovation work in your home or getting new furniture.

Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Minimize time of potential exposure	• If you hear about an emergency with potential CBRN hazards in the area, make sure that you take shelter and/or leave the exposed area as soon as possible as per instructions given to you by the relevant authorities and/or first responders. • Always follow instructions from authorities and first responders.
Avoid areas exposed to CBRN hazards	• If you are outside of the exposed area, do not attempt to travel into the area to collect personal items, pick up your children from day care facilities and/or schools or search for family members. Rely on trained emergency staff for this. • This is especially relevant for your children: they are taken care of at school.
Share information	• If you hear about a CBRN emergency, make sure to share the information with your family, neighbours and others in close proximity without putting your safety at risk. If you are instructed not to use a telephone device, please follow the advice. Beside face-to-face contact use other communication channels like social media.
Ensure sufficient distance between you and the emergency site if instructed to do so	• Following notification from authorities it might be necessary for you and your family to relocate or to evacuate. Make sure that you move to a dedicated safe area, sufficiently far away from the emergency site. Distance and direction can depend on the hazardous material involved, the size of the emergency as well as wind and weather conditions. • Take important personal items with you, as it might not be possible to return for some time.

It may be safer to shelter-in- place than to evacuate immediately if you receive information that a CBRN emergency took place in your area	• If the authorities provide no reliable information, it may be difficult to know exactly how the contamination spreads at the onset of a CBRN accident. Therefore, it may be safer to stay at your location in order to shield yourself against exposure (unless the responsible authorities have already issued the notice and instructed to shelter at home). • Houses featuring normal, solid construction provide a high level of protection. • Close, lock and stay away from all windows, exterior doors and other openings in the house. If possible, seal cracks around doors and windows, ventilation shafts with duct or strong tape. • Turn off all fans, heating and air conditioning systems and close the fireplace damper. • Make sure the radio is working in the room where you take shelter and have sufficient extra batteries for it. Keep listening to the radio and/or watch the television and follow relevant social media until information is issued announcing that conditions are safe or you are directed to evacuate. • It is ideal to have a landline telephone in the room you select to take shelter in. Mobile networks may not work well due to heavy load or may be damaged. It is possible that the internet may be down as well. • Keep a hard copy of a list of emergency contact numbers. • Bring everything you need into the room (including packaged food, bottled water, first aid kit, pets) and seal the door with duct tape, heavy plastic sheeting, clothes or anything else you may have at hand. • When you receive notice from the authorities that the danger phase has passed, the building must be aired and cleaned thoroughly in order to get rid of any contamination that it may have been exposed to due to cracks or openings. • In a sealed room do not light fires or burn gas to cook or provide warmth – these will use up oxygen and will produce toxic carbon monoxide when oxygen levels are low.
Take shelter if you are outside or in a car when you hear that a CBRN hazard is spreading in the air near you	• Look for a safe location to take shelter. This should be the largest concrete building easily accessible to you, but any building is better than staying outside or in a car in an area that is potentially exposed for a longer period.

Learn how to decontaminate yourself	• If you fear that you may have been contaminated, it is essential that quick action be taken. To limit the effect of the contamination on the body and ensure you do not contaminate others, take a few essential steps. Before entering a building or taking shelter do the following:
	  ◦ If you are outside, cover your mouth and nose with a handkerchief, a piece of cloth or similar.
	  ◦ Remove clothing without touching the outside of the items, seal in plastic bags and put the bags as far away as possible.
	  ◦ Wash skin and hair thoroughly with soap and lukewarm water if possible, rinsing eyes and ears with bottled water and blow your nose. If you do not have access to water, scraping or wiping contamination off your skin with a clean cloth or wipe is the next best option. Extra care should be taken to clean the area around the mouth, nose, eyes and ears.
	  ◦ Maintain good hygiene practices after decontaminating.

Make sure you have access to uncontaminated food and water	• Water sources can be contaminated during a CBRN emergency, and it is therefore important to refrain from drinking water from the tap or wells. Bottled water can be a safe alternative. • It may not be safe to consume fresh milk, fruit and vegetables, meat and other fresh foods during and after such an emergency. • Make sure that you have enough bottled water and packaged or canned foods stored for family members and pets for at least five days (the duration for which you may be sheltering). • Follow the advice of the public authorities in the aftermath of an emergency as to which foods are safe to consume and where to get safe food and drinking water.
Seek medical attention as soon as you can	• Seek medical attention if you think you have been contaminated with CBRN hazards, even if you do not initially show any symptoms.
Nuclear and radiological emergencies	
Listen to the instruction and guidance of the authorities regarding preventive and protective measures	• The instructions provided by the authorities are to be followed entirely and in a timely manner. If evacuation is ordered, the indicated evacuation routes and the time to commence and finalize the evacuation must be observed. • Take KI pills if instructed to do so by the authorities.
Pay attention to the weather conditions when considering whether to *shelter-in-place* or move	• The radioactivity on the ground may be several times higher after precipitation (rain or snow) from radioactive clouds than in regions where the clouds have passed without any rainfall. • An unfavourable wind direction from the site of the accident towards your location may transport radioactive particles and cause a radioactive pollution of the surfaces (soil, plants, tress, buildings, open water sources.). Almost no rise in activity can be expected if the wind blows in the direction from your location to the accident. • If instructed by the authorities to move from your location try to move upwind from the accident or emergency site.
Select a suitable room to shelter in within the building	• If the house features an underground cellar or an internal room without windows, this is the best place to stay. In taller buildings, opt for the middle floors if it is not possible to take shelter underground.
Understand the basics of decontamination	• Decontamination is the process of cleansing an object or substance to remove contaminants such as microorganisms or hazardous materials, including chemicals, radioactive substances and infectious diseases. • Decontamination can be a combination of processes, including cleaning, disinfection and sterilization. Changing clothes, washing with detergent and hot water can, in certain situations, be a satisfactory method of decontamination. Make sure that you dispose of clothes properly that you believe contain sources of contamination.

Learn how to recognize the symptoms of radiation sickness	• If a person has been exposed to a very high dose of radiation, he/she can develop acute radiation syndrome (ARS). Depending on the dose, ARS can manifest within hours or days. • Main symptoms of ARS include nausea, vomiting, diarrhoea, gastrointestinal pain, and flu-like sensation. If not treated immediately, ARS may be lethal. • In case of severe partial or localized exposure, a local radiation injury, i.e. radiation burn can occur. It may manifest as an insect bite and further evolve in a blister and a sever ulcer with necrosis unless treated in a specialized facility. • Seek medical attention if you recognize any of these symptoms.
Chemical emergencies	
Take care to avoid spillage and contamination	• When handling chemicals always wear gloves and other protective equipment as described in instructions on the packaging of the various chemicals. • Clean up any spillage right away and dispose it as described on the packaging. • Dispose of food and drink you suspect may have been in contact with chemicals. • If chemicals are burning or there are hazardous gases or vapour in the air, cover your mouth and nose and move away from the exposed area.
Call the emergency number for poisoning in a chemical emergency	• Always call the emergency number for the service that deals with cases of poisoning in your country if you suspect that you or anyone else in the vicinity has been contaminated due to exposure to dangerous chemicals. If there is no such specialized number, call the general emergency number. • If the contamination comes from household chemicals, keep any cans or containers with the information about the chemicals with you so you can describe it correctly to the emergency operator.
Take immediate action if chemicals come in contact with the eyes	• If a chemical comes in contact with the eyes, it is important to immediately flush the eyes with clear, lukewarm water for a minimum of 15 minutes. • Maintain this procedure even if the eye feels normal before 15 minutes have passed. • Seek medical help as soon as possible.
Pay attention to the weather conditions when considering whether to *shelter-in-place* or move	• If you are upwind from the spot of the accident you are likely to receive much less exposure to a chemical spread by wind than if you are in the direction that the wind is blowing. • Rain or snow will usually dilute the chemicals and hence decrease the intensity to the exposure.
Select a suitable room to shelter in within the building	• Some toxic gases are heavier than air and will therefore gather close to the ground or underground. • To be sure you avoid large concentrations of these following a major chemical emergency take shelter in a room above ground level. If the house features an internal room without windows, this is the best place to stay.
Learn how to recognize the symptoms of toxic poisoning	• Chemicals can affect the body in different ways depending on the type, and it is necessary to learn how to recognize the symptoms of toxic poisoning: breathing difficulties, irritation of eyes, throat and skin, changes in skin colour, headache or blurred vision, dizziness, lack of coordination, diarrhoea cramps or convulsions.

WILDFIRES

Please note that the foundation messages are included in the previous section: ***Key messages for all-hazards household and family disaster planning****. Separate messages are also available for other specific hazards.*

Like all fires, a wildfire (also known as a forest fire, brushfire or bushfire) requires three ingredients: oxygen, heat and fuel. A wildfire is large, uncontrolled and potentially destructive and 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). The spread of wildfires depends on the topography, the fuel available and the weather. Dry vegetation and abundant or dead wood that has not been cleared are all sources of fuel. A small fire can become a rapidly spreading inferno in a matter of minutes – particularly if it is windy.

Although they can have some ecologically beneficial effects on forest and wilderness areas, wildfires can cause extensive damage. These can lead to 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 habitat, threat to biodiversity, land degradation and increased risk of erosion. Meanwhile, the chemicals used to fight the fires can pollute natural water sources..

Assess and plan

Key messages	Context-specific details
Regularly inspect your home and property for fire hazards	• Inspect for local hazards, such as exposed firewood, leaf and brush clutter and dead and overhanging branches. • Check rain gutters to clear out flammable debris. • Check irrigation systems to ensure access to water. • Check for spaces between roof tiles or within the structure where burning embers could become lodged. • Check that flammable substances (including fertilizers and pesticides) are safely stored. • Check that all fire exits and property exit routes are clear.
Report hazardous conditions	• Immediately report any hazardous conditions that could cause a wildfire to local fire fighters.
Make your property for fire teams to easily find and access	• Make clearly marked driveways and turnaround space accessible to fire engines. Access roads should measure 3.5 meters or be 12 feet wide with vertical clearance of 4.5 meters, i.e. 15 feet.

Marla Petal

Mitigate risks: physical or environmental

Key messages	Context-specific details
Prevent wildfires	• Never discard cigarette butts on the ground. • Never leave an outside fire unattended. • Always ensure that campfires are completely extinguished after use. • Clear outdoor areas of broken glass since this can reflect sunlight and start a fire. • Dispose of glass bottles in closed recycling bins.
Select a safe location for your building	• Build on levelled ground. Fire spreads more rapidly even on minor slopes. • Set single-storey structures at least 10 meters, i.e. 30 feet from any ridge or cliff. For taller buildings, increase the distance. • Ensure that there is enough distance between buildings, following local or international standards (refer to Sphere standards for emergency shelter).
Design, build and maintain your structures with wildfires in mind	• Plant low-flammability landscaping to reduce fuel for a wildfire. • Design and construct buildings to limit their flammability. • Use fire-resistant or non-combustible building materials whenever possible. • For roofing, use terracotta, clay, metal, slate, cement, or asphalt (Class A), tiles. • For exterior walls, use stucco or masonry rather than vinyl or wood. • Treat wood or combustible materials with fire retardant. • Use only thick, tempered safety glass in large windows and sliding glass doors. • Install electrical lines underground if possible. • Install and maintain a lightning rod. • Install spark arrestors in chimneys to prevent large particles from escaping and starting a fire. • Provide at least two ground-level doors, for easy and safe exit, and two means of escape from each room (doors or windows).

Clear flammable materials away from your property	• Regularly clean roofs and gutters, removing twigs, dead leaves, needles and other debris. • Remove all dead wood and dense vegetation within at least 7 meters, i.e. 30 feet around your home. • Prune trees and shrubs so that the lowest limbs are 2–3m (6–10ft) from the ground. • Dispose of cuttings and debris. • Avoid using wooden lawn furniture.
Maintain water sources for fire fighting	• Maintain an irrigation 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. • Create a separate pump hydrant or use swimming-pool circulation pumps for dowsing properties. • Install freeze-proof exterior water outlets on two sides of the home and additional outlets 15 meters or 50 feet from home for fire fighters to use.
Take precautions with flammable materials	• Avoid open burning, especially during fire season. • Site aboveground propane tanks at least 9 meters or 30 feet from buildings. • Dispose of ashes in a metal bucket, saturate them in water for two days, and then bury them in mineral soil.

Prepare to respond: develop skills and store provisions

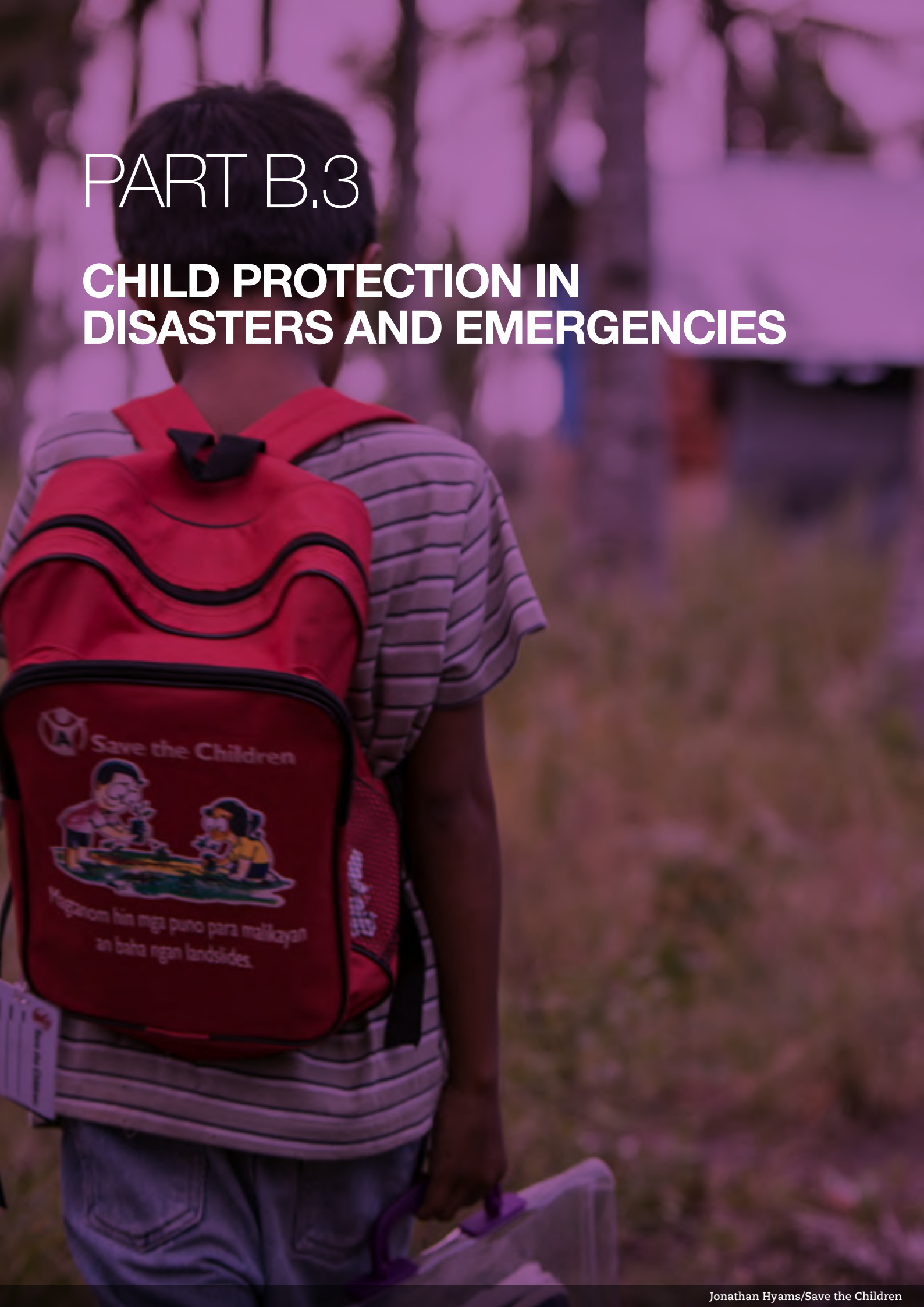
Key messages	Context-specific details
Plan and practise two ways out of your neighbourhood	• Plan a secondary way out in case your primary escape route is blocked.
Monitor conditions, stay informed, listen to the radio and follow instructions	• Listen to local radio and watch television regularly for updated information and instructions. • Stay in touch with neighbours if possible.

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. • If you are advised to evacuate, leave immediately. • Take your pets or service animals with you. • Call your out-of-area contact to notify them about where you will be going.
Leave if you think you should, or if authorities tell you to	• If you are advised to evacuate, or if you think you are in danger, evacuate immediately. The fire may spread too fast for officials to issue evacuation orders. • If you are not trained and equipped to fight a wildfire, do not put your life at risk. • Leave right away: delay could be deadly. • Make sure all fire tools are outside and easy to access.
Protect your animals	• If you have livestock or horses, sweep hay and other combustible feed away from the barn or stable. • Close windows and doors to prevent embers from entering buildings. • Consider opening barn doors and corrals to let animals escape.
Confine pets and service animals	• Confine pets and service animals to one room. • If you are evacuating with animals, leave early.
Keep your vehicle fuel tank full and ready to go	• Face your vehicle in the direction of escape. • Shut your car doors and close the windows. • Have your key ready, or leave it in the ignition.
Wear protective clothing	• Wear sturdy shoes, long cotton or woollen trousers/pants, long-sleeved shirts and gloves. • Carry a damp handkerchief to protect your face. • Carry wet towels to cover your head or bare skin or to wrap your feet, in case you need to run through small area of fire.
Prepare your home for a fire, if you have time	• Shut off the gas at the meter. • Close the valves on propane tanks. • Open fireplace dampers. • Close windows, vents, doors, blinds and non-combustible window coverings. Use wet cloth to block any other openings. • Remove lightweight or combustible window coverings. • Move combustible furniture to the centre of the home, away from windows and doors. • Place in a pool or pond any valuables that will not be damaged by water. • Remove combustible items from around the home. • Connect hoses to outside taps. • Gather your fire tools.
If your area has a *stay or go* policy, and if you are trained, you may decide to stay	• If you plan to stay, make sure that you keep and know how to use fire suppression tools, including a rake, an axe, a handsaw or chainsaw, a bucket, a shovel, a ladder and sand buckets. • You may have to fight small fires before professional help arrives. • Remember that normal water pressure may not be available.

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 your body with soil. Breathe air close to the ground. • You cannot outrun a fire.
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.
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 airborne particles. • Keep children away from clean-up sites. • Minimize the health risks from breathing dust particles by wetting any debris, and using a two-strap dust particulate mask, coveralls, leather gloves, and heavy-soled shoes during clean-up. • Use rubber gloves when cleaning. • Check for assistance when cleaning up and disposing of hazardous materials.

PART B.3

CHILD PROTECTION IN DISASTERS AND EMERGENCIES



Jonathan Hyams/Save the Children

Child protection in disasters and emergencies

Child protection in disasters and emergencies refers to the prevention and response to abuse, neglect, exploitation, and violence against children in times of emergency caused by natural or manmade disasters, conflicts, or other crises.[4] This includes all forms of physical and psychological abuse, sexual and gender-based violence, and deprivation of basic needs. The age of a child is defined, to reflect the United Nations Convention on the Rights of the Child, as any person under the age of 18 years.

To optimize impact, all actions listed below should consider the following six principles.[5] For more information about each principle, see the *Minimum Standards for Child Protection in Humanitarian Action*.

Principle 1: Avoid exposing children to further harm as a result of your actions. This includes recognizing that conversations about protection issues can trigger emotional reactions; as such all conversations should be made safe and support systems made available.

Principle 2: Ensure children's access to impartial assistance. This involves taking deliberate action to involve community members, families and children that might otherwise be marginalized, socially excluded, or discriminated against such as children with disabilities, orphans, street children and children at risk of being unaccompanied. Specific efforts should be made to have equal participation from women and men, and girls and boys.

Principle 3: Protect children from physical and psychological harm arising from violence and coercion.

Principle 4: Assist children to claim their rights, access available remedies and recover from the effects of abuse. This includes having in place, ensuring accessibility to, and communicating referral systems to ensure any child protection concerns are reported and survivors are supported.

Principle 5: Strengthen child protection systems. Considerations for this include coordinating with key child protection agencies and influencers within the community.

Principle 6: Strengthen children's resilience in humanitarian action. Essential to this is empowering girls and boys to be active agents in their own protection through involving their participation in the assessment, design implementation, and monitoring and evaluation of child protection activities.

4 Adapted from Child Protection Working Group. *Minimum standards for child protection in humanitarian action.* Child Protection Working Group. 2012.
5 Ibid.

Assess and plan

Key messages	Context-specific details
Introduce safety concepts to children	• Help children to learn to identify trusted adults in the community; people who can help them with different needs in disaster situations, and learn how to dial help on a mobile phone. • Be sure that children are familiar with their community surroundings. For example, check important buildings like schools, sport centres, libraries, etc. and find alarms and exits, first aid materials, light switches, supplies, off-limits areas, and evacuation routes.
Involve parents and teach children the key mechanisms for child protection: family, school, community, and peers	• Talk with children about the hazards they face and seek their perception about these risks (what they think are the highest risks and why, what questions or concerns they have, how they would want to be treated, etc.). • Reassure and remind children that there are caring adults working to keep them safe in all types of emergency situations. • Ensure adult participation in school and community-based child protection coordination mechanisms. • Provide information to children on existing local child protection mechanisms with key contact information and how to access services, if necessary.
Teach children their rights in emergencies and disasters	• Teach children principles of non-discrimination, and that *all* children have the right to be safe and protected, including in the event of an emergency or disaster. • Discuss with children how girls and boys might be affected differently by different hazards. Explore how hazards might affect children with disabilities.
Ensure that every child (and family member) knows safe places to go to, and safe ways to get there	• Ensure that *all* children are aware of safe spaces in case of different types of hazards. • Include children and adults in mapping risks, safe spaces, and safe routes to get home, to school, or to access support system in disasters. Learn about and discuss any different perspectives between adults, children and youth.
Teach children their identification information	• Teach younger children their full name, parents' names and their contact information (including address, province, district, village). • Teach older children their school name and out-of-area contact.

Keep copies of identification documents and family books in alternate locations to avoid destruction and loss	• Obtain a birth certificate for every child. • Record births accurately in a family record book. • Keep certified copies of the family book in a safe place, separate from the original in case of loss or damage. • Keep a copy of any other information that is important for educational continuity, for example immunization records, school information, individualized education plans for children with disabilities.

Mitigate risks: physical or environmental

Key messages	Context-specific details
Take responsibility for protecting children, especially through disaster risk reduction and response-preparedness	• Act appropriately, with respect, and nonviolence towards children. • Work with your community to make it clear that violence, social exclusion, or discrimination against children is not acceptable. • Prevent and stop any child from being abused physically, sexually or emotionally, or exploited. Make certain *all* adults understand this responsibility. • Ensure that parents, carers and teachers are clear about their responsibilities and duty of care to protect children. • Encourage schools and other organizations, to have child protection policies in place that define the roles and responsibilities of adults to protect girls and boys. • Help to put prevention and awareness mechanisms in place for child protection.

Ensure that children's work is age-appropriate, is not harmful or hazardous to their development physically, intellectually or emotionally and does not interrupt their education	• Be sure that all household members are aware of children's rights, which are valid even in cases of disasters and emergencies:
	  • Children have the right to be educated, participate, to play, and to be protected.
	  • Children should not have to work long hours or do dangerous tasks, inside *or* outside of their family and community.
	  • All violence, such as physical, sexual and emotional, against children of any age, gender and background is unacceptable, including in work settings.
	  • Child labour and trafficking is unacceptable and is against the law.
	  • Neither girls nor boys should be forced to drop out of school to work.

Prepare to respond: develop skills

Key messages	Context-specific details
Ensure that children are never left without a capable and trusted caregiver	• Identify ways that children can be supervised when parents are working in fields or doing other tasks. • Plan and practice to establish child friendly spaces during and in the aftermath of a disaster that are managed by trusted, well-trained, and screened caregivers in the community.
Allow children to participate in disaster recovery in age-appropriate ways.	• Support girls and boys of all backgrounds to participate in community, school and family decisions that affect them. • Allow children to participate in disaster response activities only when these are safe from physical danger. • Support children to participate, where appropriate, in peer-to-peer education on child protection themes as part of disaster risk reduction.

Teach and practice standard operating procedures – especially for *safe family reunification*
 	
(See section on School Safety for more details)
	• Teach children to listen carefully for safety directions.
	• Teach and practice standard operating procedures to be able to making safe decisions in disaster and emergency situations.
	• Parents or guardians inform school of adults with permission to pick-up children in case of emergency or disaster.
	• Check that children know to wait at school for *safe family reunification*.
	• Plan with children in advance, places where they can meet their families, should children become separated during a disaster.
	• Ensure that training for children reflects their needs, is age-appropriate, and is sensitive to prior traumatic experiences, special needs, and children's personalities. Allow children to provide feedback and to opt out if they feel unsafe.
	• Increase complexity of practice drills as children develop. Select age appropriate educational tools emphasizing positive actions. For example,
	  ◦ **Beginners:** Videos, scenario discussions and walk-through slow-motion drills.
	  ◦ **Intermediate:** Pre-announced and unannounced drills.
	  ◦ **Advanced:** Full scale drills and simulations.

Teach children response options for disasters that involve violent intruders:
 	
Get out. Stay out. Hide out.
	• Teach the following three options for safety in case of a violent intruder.
	  • **Get out:** If it is possible to get away from danger, go to a safe place. Teachers, leaders and first responders will come to find you in your meeting or another place.
	  • **Keep out:** If it is not possible to get out of the building or harm's way, keep danger out of the room by locking and blocking doors and staying away from windows. This is similar to the *lockdown* standard operating procedure at school.
	  • **Hide out:** Stay out of sight from danger by hiding behind large pieces of furniture. Try to stay as quiet. An *all clear* signal will be made to indicate that the danger has passed.

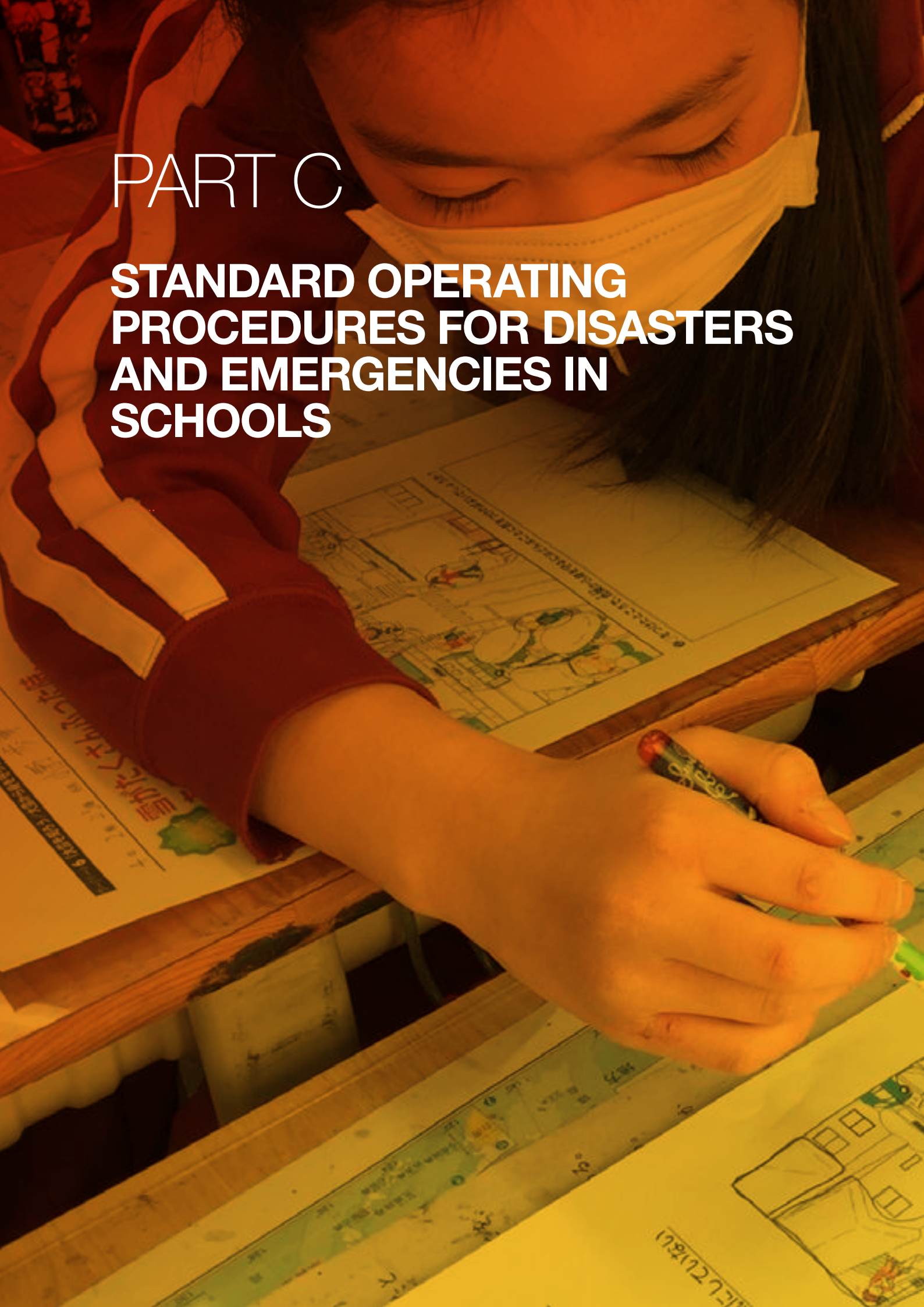
After an incident, support children to feel protected and comforted	• Provide understanding, patience and support. • Respect children's thoughts, feelings and opinions, and discuss those with them. • Make sure children have time to play and relax. • Make sure children get enough food, water and sleep. • Avoid that children are repeatedly exposed to images of death, injuries and destruction. • Share information about the incident. • Provide familiarity and stability, and resume normal routines as soon as possible. • Provide access to safe places where children can play, connect with others and feel protected (e.g. child friendly spaces). • Encourage peer-to-peer learning groups for older children. • If children are exposed to injuries, violence or death during disasters, seek psychosocial support from professional providers.[7]

Learn to recognize normal responses under abnormal situations, and signs of distress and trauma	• Recognize that:
	  • Fear is the normal human response to danger.
	  • Some anxiety is positive and to be expected, for example during emergency drills.
	  • Normal human responses to danger include freeze, flight and sometimes fight.
	• Practice healthy coping strategies to handle fear and stress. For example, being with others, expression and solidarity through conversation, arts and mutual aid, mediation, physical exercise, participation in risk reduction and recovery activities.
	• If a child appears extremely fearful, angry or withdrawn, or if a child's responses are getting worse rather than improving, seek help from a mental health professional.

Teach children the difference between safe and unsafe means of migration, if that becomes necessary	• Recognize potential vulnerabilities and risks, like separation, violence, injuries, and psychosocial trauma that children may face due to migration. • If adults and children find themselves forced to be separated or migrate for purposes of safety, work or education, discuss risks and protection factors for unaccompanied or separated children. Seek training on the safe channels through which to migrate. • Minimize disruption to children's schooling and prevent entry into harmful and hazardous work. • Facilitate integration of children into new schools, sports and cultural activities, and neighbourhoods.

Children learning about standard operating procedures for earthquakes at their elementary school, Pidie Jaya, Aceh

Children participating in disaster risk reduction education at their school in Leyte, Philippines.



PART C

STANDARD OPERATING PROCEDURES FOR DISASTERS AND EMERGENCIES IN SCHOOLS

Standard operating procedures for disasters and emergencies in schools

These standard operating procedures for disasters and emergencies in schools are designed to be a template for national or sub-national education authorities to adapt and adopt as standard guidance for all primary and junior schools.

Standard operating procedures

Standard operating procedures for emergencies and disasters for schools are an essential part of school disaster management policy. They are a set of written and required safety procedures to be known and followed by all school workers and students, in the event of disasters or emergencies. Standard operating procedures, can and should be considered and customized to each school's unique circumstances. Each school management committee should work with local community and public safety authorities, to consider these standard procedures and review to make any additions or amendments, as part of the school readiness and resilience plan.

These are built around six basic emergency procedures detailed below:

- building evacuation
- evacuation to a *safe haven*
- *assemble and shelter outside*
- *shelter-in-place*
- *lockdown*
- *safe family reunification*

It is important for school staff to have a strong understanding of these procedures. You will need to: think through how these will work and what adaptations are needed for your schools.

You will also need to teach these rules to your students (see the section above).

If you have any students or staff with individual functional or access needs, or disabilities, it is important to discuss what adaptations and support will be needed to make sure that they too will be safe. If any individual will need the help of those around them, it is important that *everyone* knows how to help that person (rather than one designated person) when the time comes.

If you have any early childhood education programmes and/or primary school classes, you will need to think through, talk through and practice adaptations for younger children. For individuals that cannot walk, you may need wagons, cots or something with wheels. For small children who need to stay together, be sure to teach them how to hold on to a special rope with a loop on it for each child to hold on to so that they do not get separated.

The emergency standard operating procedures decision tree can be used to help any staff member assess a situation quickly and use the correct procedure. Details of how to use the tree and each procedure are explained below.

Emergency standard operating procedure decision tree

The ***emergency standard operating procedure decision tree*** illustrates the different circumstances that lead to these four basic procedures.

1. **What type of hazard?**
- Is there sufficient early warning so that you have enough time to close school and use normal student-release procedures to safely reunite all children with their families? If not, for some it will be treated like a rapid onset hazard.
- Is the hazard rapid-onset, without warning (such as acts of violence, earthquake, fire, sudden severe flooding)? If so, are you ready to react automatically with the appropriate standard operating procedures?
- If the hazard is slow- or medium-onset (such as floods, cyclone, winter storms, etc.), what kind of early warning information will you have? Has the system been tested? How will you communicate the early warning information to parents, guardians and students?

2. **Is the building safe?**
- If the building is potentially unsafe, then ***building evacuation*** should be carried out immediately.
- In the case of rapid onset hazards such as fire and strong earthquake, the building must be assumed to be unsafe, and therefore cautious building evacuation should be *automatically* carried out.
- Note that during earthquakes, everyone should *drop, cover and hold* first, and building evacuation should begin only once the shaking has stopped. In other situations, a rapid assessment can be made before evacuation is announced by a school-wide alarm sound.
- If the building or a particular part of a building is safe, then the students and staff should be instructed to go to this area to *shelter-in-place*. *Reverse Evacuation* is practiced for orderly return from assembly area back into the designated area for *shelter-in-place*.

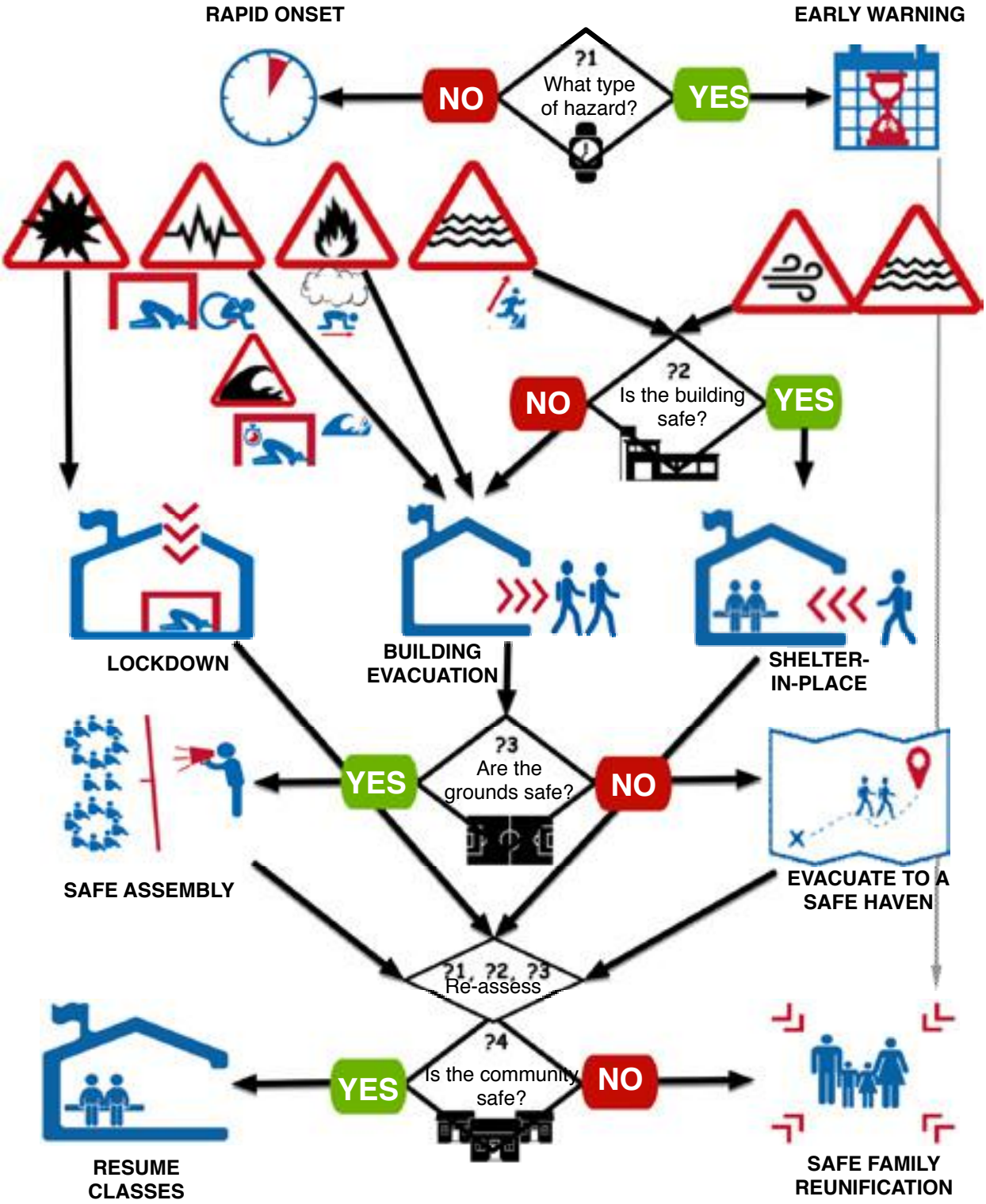
3. **Are the school grounds safe?**
- If yes, follow the standard operating procedure for *assemble and shelter outside*.
- If no, follow the standard operating procedure for *evacuation to safe heaven*. If school grounds are known to be unsafe, for example, in coastal area with tsunami risk then immediately evacuate to higher ground.
- A rapid assessment of hazardous conditions, for example, hazardous materials, fallen power lines, pipeline ruptures will help decide between these two options.

Reassess for safety – go over 1,2 and 3.

- In all cases, no matter which procedure you have followed, you will need to continuously reassess the conditions, and maintain or implement the appropriate standard operating procedure. Teachers and other helpers have permission to deviate from these standard operating procedures or instructions, if it will help keep people safe.

4. **Is the community safe?**
- In the case of real disasters and emergency incidents, you must use *safe family reunification procedures*. Students should be returned directly and only to the care of their parents or guardians or pre-designated emergency contacts and each reunification should be documented.
- Students should remain cared for and supervised until the last student is reunited with a parent or guardian or pre-designated emergency contact and the *all clear* is given by the incident commander (explained in the next section).
- In the case of drills and small events the administrator can declare an *all clear* and issue a return to class instruction, and students may return home, at the end of the school day, as usual.
- To re-occupy building, use *reverse evacuation* procedure.

Emergency standard operating procedure decision tree

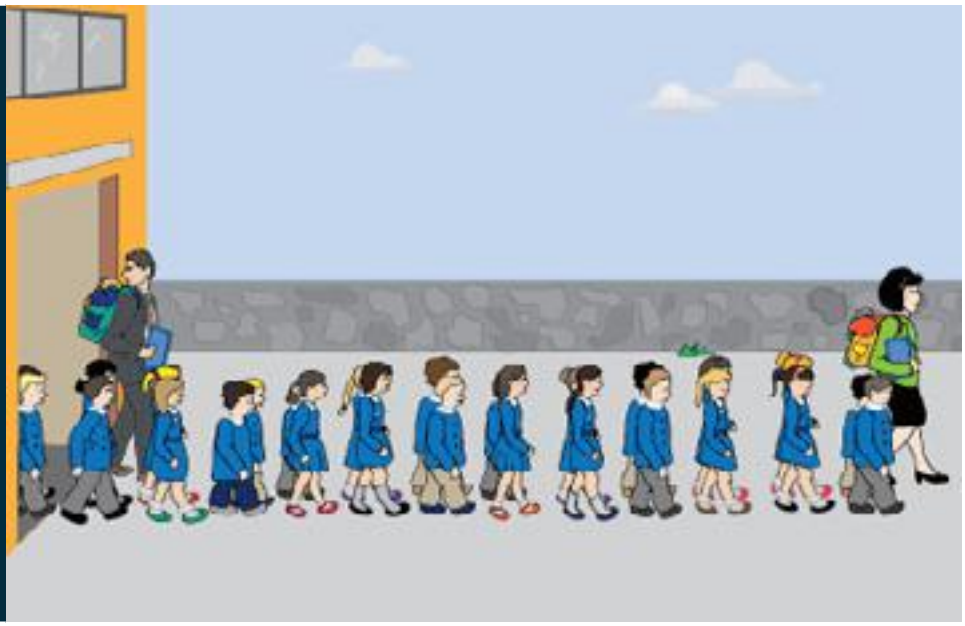


Standard operating procedures: details

Building evacuation

Purpose: *To protect students and staff in case of fire or other hazards in the building.*

First person to verify the danger: Sound the unmistakable building evacuation or fire alarm.



Administration	Staff	Students
1. Activate standard emergency management system (e.g. incident command) as needed. **2.** Maintain communication with staff and students. **3.** Reach out to emergency responders. **4.** Notify and update parents or guardians when it is safe to do so. **5.** Announce *all clear* when the emergency ends.	**1.** Remind students of building evacuation rules: *Do not talk. Do not run. Do not push. Do not go back*. (Be sure young children have practiced holding on to a looped handle on to the evacuation rope). **2.** Close doors and windows. **3.** Position one teacher at head and one at the back of two classes. **4.** Take classroom *go-bag* (or bucket), emergency clipboard or notebook with student roster and bag with student comfort kits. **5.** Check safety of the route. **6.** Lead students to regular places to *assemble and shelter outside*. **7.** If and when conditions are safe, lead a *Reverse Evacuation* back to the classroom, following the same rules.	Follow rules and instructions and help out. **Building evacuation rules:** **Do not talk** so you can hear the teacher **Do not run** so you do not get hurt **Do not push** so no one else gets hurt **Do not go back** so you stay safe

Questions: Are your exit routes clear, and marked? Are any adaptations needed for your school? Are exit routes and assembly areas navigable by students with disabilities?

Assemble and shelter outside

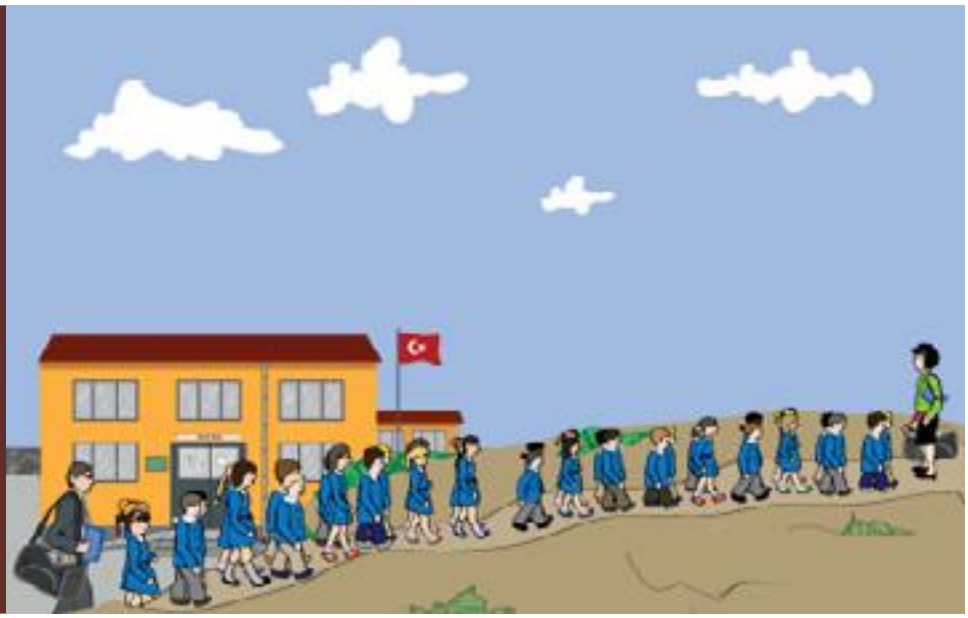
Purpose: *To protect students and staff and provide for their comfort until the all clear is given to return to class, or until everyone can be safely reunified with their families.*

Administration	Staff	Students
1. Activate incident command system with any functions needed (Operations: search and rescue, first aid, student supervision, *safe family reunification*. Logistics: water and food, shelter, sanitation). 2. Involve adult volunteers and capable students.	1. Conduct building evacuation by leading students to, or meeting them at the designated emergency assembly area. 2. Have students sit quietly and take student attendance roll. 3. Remind students about the *safe family reunification* procedures and vits purpose. 4. Keep students quietly occupied, so that announcements can be heard clearly. 5. Teachers are to remain with their class at all times. Students must remain seated together as a class. 6. If students need to be picked-up, follow the *safe family reunification* procedures or if the *all clear* is given, conduct a *reverse evacuation* back to class	1. Go to the designated assembly area for your class. 2. Sit quietly with your class, unless your teacher instructs you otherwise. 3. Be prepared to help with water and food, shelter and sanitation, as requested. 4. Wait to follow next instructions for *evacuation to safe haven, shelter-in-place*, *safe family reunification* procedures, or *all clear* and return to class.

Questions: Where is your outside assembly area? Does everyone know where to assemble in their class groups? Are any adaptations needed for your school? Where is your back-up assembly area, in case the normal one is not safe?

Evacuate to a safe haven

Purpose: *To protect students and staff in case of hazards in the school environment.*



Administration	Staff	Students
1. Schools that face known risks such as flooding, landslide, debris flow and schools that do not have a safe assembly area on site should arrange and prepare alternate safe assembly site and evacuation routes ahead of time. **2.** Inform parents or guardians of this alternate site. **3.** Take office evacuation supplies box. **4.** Lead immediate evacuation to previously identified *safe haven*.	**1.** Position one teacher at the head and one at the back of the group. **2.** Take classroom *go-bags* (or bucket), emergency clipboards or notebook, and bag with student comfort kits. **3.** Check safety of the route. Include any students on the way, in the group. **4.** Lead students to the *safe haven* and take student attendance roll. **5.** When an *all clear* is given by the incident commander, lead a *Reverse Evacuation* back to classrooms, following the same rules. **6.** If students need to be picked-up, follow the *safe family reunification* procedures.	**1.** Use buddy system. **2.** Stay together. **3.** Move quickly and quietly. **4.** At the *safe haven*, follow the standard operating procedures for *assemble and shelter outside*.

Questions: Where is your *safe haven*? Where is your back-up *safe haven*? Do you have needed supplies there or can supplies be readily transported to that location? Are any adaptations needed for your school?

Shelter-in-place indoors

Purpose: *To protect students and staff when there are dangers outside of school. For example, severe weather or flooding, bee swarm, environmental hazard such as toxic chemical release. Provide for their comfort until everyone can be safely reunified with their families. Shelter-in-place is appropriate when evacuation is not necessary, or when there is not time to evacuate.*

Administration	Staff	Students
1. Announce instructions to staff and students to assemble in their designated *shelter-in-place* location for the particular threat, such as, fire, tornado and flood as locations may differ. **2.** Monitor and provide information updates and instruction. **3.** Announce *all clear* when the emergency has ended.	**1.** Close doors and windows, as appropriate. **2.** Take student attendance roll. **3.** Monitor conditions and provide updates and instructions as available. Use phones only for emergency communications. **4.** Supervise students indoors with schedule for quiet activities, recreation, eating and sleeping, for the duration of the event **5.** Create private space for a make shift toilet using a bucket or plastic bags. **6.** Allow students to help the teacher and one another.	**1.** Stay in your classroom and follow your teacher's instructions. **2.** Participate in quiet activities and help out. **3.** If you are outside of the classroom without an adult, if you cannot make it to your, *shelter-in-place* location safely, try to join another class and inform the teacher that you are there.

Questions: How will students who may not hear or understand an intercom announcement (e.g. those with hearing difficulties or cognitive disability) be made aware of the need to *shelter-in-place*? Do students know what to do if they are away from the classroom without an adult (e.g. in the restroom, etc.)? Are there any adaptations needed for your school?

Lockdown

Purpose: *To protect students and staff by keeping any threat outside. This could include, for example, a wild animal on the loose, crime occurring in the neighbourhood, or a violent intruder.*

Administration

1. Use a unique alarm or intercom announcement (*Not fire alarm or loud siren*) to signal immediate *lockdown*.
2. Monitor situation and reassess.
3. Be prepared to transfer incident command to police or public safety authorities and provide support. Head of school remains responsible for students.
4. Provide *all clear* when it is safe to do so.
5. Following incident inform students and parents or guardians and provide time for review and discussion.

Staff

1. If it is possible to get your students far away from the danger, do so. However, if not, you will need to *lockdown*, keep the danger out and hide out.
2. Warn others to *lockdown*.
3. Gather students inside in a secure area away from threat.
4. Signal everyone to stay calm and silent.
5. Close and lock doors to keep the danger out. Have students help block doors with furniture.
6. Have everyone stay out of sight, by hiding behind furniture, away from windows and doors, and be as small a target as possible.
7. Turn off lights, and radios and put mobile phones on silent.
8. Stay out of sight away from doors and windows.
9. Remain in *lockdown* until the danger has passed, and *all clear* instruction has been received from authorities.

Students

1. Help to block doors with furniture.
2. Stay silent and follow teacher instructions.
3. Hide behind furniture, away from windows and doors. Stay out of site.
4. If you have a cell phone, make sure it is set to silent.

Questions: How will students who may not hear or understand an intercom announcement (e.g. those with hearing difficulties or cognitive disability) be made aware of the need to *lockdown*? Do students know what to do if they are away from the classroom without an adult (e.g. in the restroom)? Are any adaptations needed for your school?

Safe family reunification

Purpose: *To ensure that students and families are safely reunited in case of emergency or disaster. Students under the age of 18 are only permitted to leave the school or the safe haven in the company of a parent or guardian or a pre-designated adult approved in advance by a parent and guardian.*

Administration

1. Parents or guardians provide the school with updated list of adult *emergency contacts* with permission to pick up student any time.
2. Make plans for student pick-up at school or *safe haven*, and where you will meet.
3. In the event of emergency or disaster, students will only be released to custodial parent or adult on this list.
4. The school administration will notify and update parents or guardians about any incident, as soon as it is safe and possible to do so.

Staff

1. Make sure that both students and parents or guardians are familiar with student release procedures for emergencies and disasters.
2. Make plans in advance for transport to *safe haven*, if necessary.
3. Notify parents or guardians of *safe haven* location(s).
4. Notify parents or guardians when and where it is safe to pick-up their children.
5. Ensure that students are released only to custodial parents or guardians or pre-designated persons listed in the *student emergency release contact information*. Verify the identity of all adults before releasing students to their care.
6. Keep record of all student releases using a sign-out log or *student-family reunification form (permit to release child)*.
7. Use these procedures any time normal end-of school procedures might be unsafe.

Students

1. Be patient and follow *safe family reunification* procedures.
2. Do not leave with anyone except your parent or those adults approved in advance by your parent or guardian.

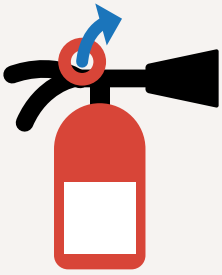
Questions: Are parents familiar with the identified on-campus and off-campus reunification plan and *safe haven* locations? Do they know that students can only be released to parents or guardians and pre-designated adults listed in the *student emergency release contact information? Are students aware of the safe family reunification procedures?* How will you notify parents or guardians of the need to pick-up students? Are any adaptations needed for your school?

Hazard-specific safety rules

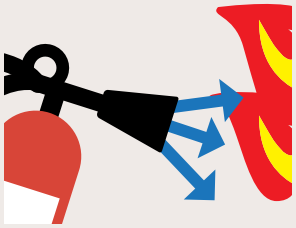
Fire safety rules:

- **If you hear a fire alarm, see fire or smell smoke:** Treat this as a real emergency. Follow building evacuation procedures. Never open a closed door without checking first for heat. Do not open a hot door.
- **If you see a small fire:** Put out small fires (smaller than a bucket) with fire extinguisher or cover source of fuel with blanket. For modern fire extinguisher use, remember ***pull*** safety pin from handle; ***aim*** at base of the flame; ***squeeze*** the trigger handle; and ***sweep*** from side to side at the base of the flame. Shut off source of fuel if safe to do so (e.g. gas).
- Activate fire alarm. Alert others. Evacuate building. Close doors and windows on your way out. Call emergency telephone number and report location of fire as soon as it is safe to do so.
- **If the fire is bigger than a bucket, activate the fire alarm:** Alert others. Close doors and windows if it is safe to do so. Evacuate the building. Shut off source of fuel if safe to do so (e.g. gas). Call emergency telephone number and report location of fire as soon as it is safe to do so.

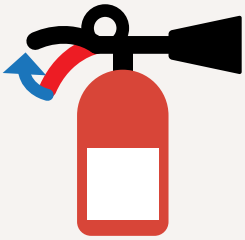
If you have an ABC fire extinguisher:



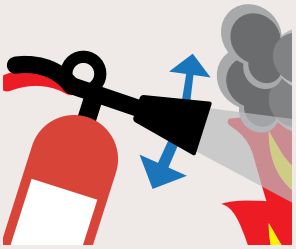
1. **Pull** the safety pin from handle



2. **Aim** it at the base of the flame



3. **Squeeze** the trigger handle



4. **Sweep** from side to side at the base of the flame

- **If you are caught in smoke:** Drop down on your hands and knees and crawl out. Breathe shallowly through your nose. Hold breath as long as possible. Use damp cloth over mouth and nose. **Get down low, and go go go. Feel the door – do not open an interior door, if it is hot.**
- **If you are trapped in a room by fire:** Block smoke from entering with damp cloth, under door. Move away from the fire, closing as many doors as possible between you and the fire. Signal others if you are trapped.
- **If you are on fire:** Stop, drop, cover and roll. Stop where you are. Cover your face with your hands. Drop to the ground. Roll the burning part of your body on the ground. **If another person is on fire:** Push them down, roll them, and/or cover with blanket, rug or coat.

Earthquake rules:

When you first feel the ground shaking, shout loudly: ***Earthquake position:*** *drop, cover and hold on.* When the shaking is over, evacuate outdoors, away from the building.

The earthquake position

When you feel the shaking, move away from things that can fall or slide.

- **Drop** to your hand and knees to protect yourself from falling injuries, and falling or flying objects. Crawl to take cover if it is available.
- **Cover** your head and neck to protect from serious injuries (e.g. under a desk or table if one is available).
- **Hold on** to your cover (if you have one).

- If **in classrooms**, the person closest to the door should open it fully. Drop down on your hand and knees. Cover your head, neck and face. Go under a sturdy desk or table to protect your head and neck and as much of your body as possible. Hold on to your cover. Stay away from tall and heavy furniture or heavy equipment, and overhead hazards.
- Do not use elevators.
- If in a **wheelchair**, lock it and take the brace position covering head and neck.
- **If in the science lab and/or kitchen** and if it is safe to do so, extinguish any open flames, and close hazardous materials containers and/or place out of harm's way before taking cover. Stay away from a hot stove, overhead cabinets and from hazardous materials that may spill.
- If in **open areas**, where no cover is available, move towards an interior wall and away from falling and overhead hazards. Drop and cover, protecting your head and neck with your arms.
- If in **the library, workshops and performance areas**, move away from shelves, books and instruments if possible.
- If in a **stadium seating**, take the brace position until the shaking stops. Follow ushers' instructions for orderly evacuation.
- If **outdoors**, move away from buildings, walls, power lines, trees, light poles and other hazards. Drop down to your hands and knees and cover your head and neck with your hands.
- If **in school transportation**, the driver should pull over and stop the vehicle, away from overhead hazards. Passengers should get down low, and take the brace position.

After the shaking stops:

- Move outdoors, away from the building to *assemble and shelter outside*.
- In case of moderate or severe earthquakes, before you exit your room, check around you for anyone injured.
- Administer life-saving treatment (open airway, stop serious bleeding, treat for shock). Ask responsible students to assist those who are slightly injured. If a severely injured or trapped individual is inside, make them comfortable. Give them a whistle and comfort item and reassure them that search and rescue team will come for them. If staying would be dangerous, non-ambulatory injured should be transported with the class.
- Extinguish any small fire.
- Take ten seconds to look around and make a mental note of damage and dangers to report.
- Leave your doors unlocked and open. Check for safe exit routes and then carefully evacuate building, moving away from the building.

During an aftershock:

- Take the same protective measures as during the initial shaking.

Tsunami safety rules:

- If you are in a tsunami risk area, then you must identify a safe evacuation route to higher ground. It may be necessary to make these routes more accessible by building paths, stairs, ladders or platforms.
- As soon as you feel the earthquake, ***drop, cover, hold on and count*** *the seconds, slowly*, out loud. If the earthquake is *long or strong*, then ***evacuate to a safe haven*** immediately. Move away from the water, to higher ground. Long usually means that the shaking lasts for more than 40 seconds. Strong usually means that the shaking makes it difficult to stay standing.
- If you cannot get to higher ground, then evacuate vertically to upper floors, platforms or trees. Stay there until you are sure that the danger is passed.
- Heed any early warning announcement received.

Flood safety rules:

Slow rise flooding:

- Follow early-warning instructions.
- If there is sufficient time, protect records and electronic equipment by placing them high up.
- Evacuate to higher ground if you have time.
- Take the *go-bag* with supplies and *evacuate to the safe haven*.

Sudden severe flooding:

- Evacuate affected spaces going to higher ground or evacuate vertically to higher floors, and *shelter-in-place*.
- Take the *go-bag* with the supplies. **Do not enter floodwaters. If you must enter floodwaters, use flotation devices prepared in advance.**

Storm safety rules:

Stay informed of cyclone, hurricane and typhoon tracking information and follow any early warning instructions and advisories.

When there is thunder, go indoors.

Stay off the telephone. Unplug all electrical appliances and equipment. Stay away from running water. Listen to weather advisories on battery-powered radio.

Follow the 30/30 rule:

1. Count the seconds between seeing lightning and hearing thunder. If this time is less than 30 seconds, lightning is still a potential threat. Seek shelter immediately.
2. After the last lightning flash, wait 30 minutes before leaving the shelter. Half of all lightning deaths occur after a storm passes. Stay in a safe area until you are sure the threat has passed.

If you are outdoors:

- Plan ahead. Know where you will go if an unexpected thunderstorm develops.
- Monitor weather conditions and be prepared to take immediate action to get to a safe place before the storm arrives.

- If you are boating or swimming, get to land, get off the beach and find a safe place immediately.
- Stay away from water since it can conduct electricity from lightning. Seek shelter in a safe permanent, closed structure, such as a reinforced building. If there are no reinforced structures, get into a car or bus, keeping windows closed. Keep your hands on your lap and feet off the floor.
- If you are in the woods, find an area protected by a clump of low trees. Never stand under a single, large tree in the open.
- As a last resort, go to a low-lying, open place. Be alert to flash flooding.
- Stay away from tall things – trees, towers, fences, telephone poles, power lines. Be aware of the potential for flooding in low-lying areas.

In case of hailstorms, the safest places are indoors, away from windows, with shutters, blinds and drapes firmly closed. If in vehicle, stay inside and face away from windows. Get down and cover head with arms. If outdoors, use arms, bag, books to cover your head and move towards shelter.

If you see or feel lightning, go indoors. If you are caught outside during a lightning storm and if your hair stands up on-end or your skin tingles, light metal objects start to vibrate, or if there is only a second or two between the flash and the bang, do the lightning crouch to limit electricity from reaching your vital organs. Do not lie flat on the ground. Leave three body lengths between you and the next person.

Save the Children/ Fiji

The lightning crouch:

- Squat
- Balance on your toes
- Touch your heels together
- Cover your ears

If lightning strikes a person:

- Call for help. Get someone to dial your emergency number.
- A person who has been struck by lightning needs medical attention as quickly as possible. If the person has stopped breathing, begin rescue breathing (if you are properly trained). If the person's heart has stopped beating, someone trained in cardiopulmonary resuscitation should administer rescue breaths and chest compressions.
- Look and care for those with other possible injuries, and check for burns.
- Move the injured person to a safer place.
- Remember, people struck by lightning do not pass electric charge, and they can be handled safely.

Hazardous materials rules:

Evacuate upwind to a *safe haven* or *shelter-in-place*, closing and sealing windows, air-ducts.

- **Chemical spills or suspicious materials:** If possible and safe to do so, limit release at the source and contain the spill. Shut down equipment. Evacuate the immediate area. Do not operate light switches, which may spark combustible gases. If danger extends beyond immediate area, pull fire alarm and follow the *building evacuation* and *assemble and shelter outside* procedures. First witness of the hazardous materials leak or spill should call the emergency telephone number and give details of materials and location, and number of people in the vicinity.
- **Gas leak:** Sound an alarm, issue and alert using public address system or go door-to-door. Follow *building evacuation and assembly* procedure. Do not operate light switches. Call the emergency telephone number.
- **Explosion:** If you hear or expect an explosion, drop and seek cover under a desk, tables or other furniture that will protect you against flying glass and debris. Leave doors open to permit exit, if building is damaged. Stay away from outside walls and areas where there are large pieces of glass and/or heavy suspended light fixtures. Be on guard for secondary or multiple explosions. When it is safe, report the incident to public safety authorities. Standby for further instructions from authorities.

Turning knowledge into action

Save the Children / Philippines

Turning knowledge into action: practice school drills and reflect on them to improve.

School emergency drills should be tailored to expected threats and hazards. Every school should conduct at least three fire drills per year, and at least one *full simulation drill* to practice for the most common and/or most serious hazards you are likely to experience. Try these using different scenarios and at different times of the day. Try them when the school principal is there and when he or she is not there. The purpose of a drill is to prepare for the unexpected, so if you make it too easy, you will not learn how to adapt to the real situation. Drills should always be treated as the real thing.

The objectives of an emergency drill are that:

- everyone is safe and accounted for (by name)
- the emergency decision tree guides periodic decision-making
- students remain safe, comfortable and supervised in the safe assembly area
- order prevails and panic and chaos are avoided.

During a full simulation drill you may also practice *safe family reunification*.

This will mean realistically thinking through how long students may need to be cared for. You may need shelter, sanitation, water and food in addition to first aid.

Good drills are a learning process. They begin with advance preparation by staff, providing an opportunity to train students in classroom groups, remember procedures, and check on provisions. The drill itself is an experiential learning opportunity. Following the drill, students can debrief with teachers in the classroom. *The most important part of any drill* is the discussion among all groups of participants, evaluation, and the *updated action plan* that follow the drill.

Use *sample scenarios* to help you with your drill planning. You can build on available examples, or make your own.

Use *injects* to add details to a scenario to make simulation drills more realistic. *Injects* refer to *new* information and challenges that are introduced during the drill, which require thinking and problem-solving, just as would happen in real life. For example, without informing the others, ask a couple of children to stay behind, pretending to be injured. See if they are identified as missing.

Use the *drill preparedness checklist form* to help you prepare yourselves, your students, and their parents or guardians.

Turning knowledge into action: collect, maintain, and replenish your emergency supplies

The administration office go box must include essential student records and supplies for tracking students for *safe family reunification*, and for communication and safety.

School emergency supplies can be located both in classrooms, to be taken along in case of building evacuation, and in a shed, container or bin, stored outside the main school buildings, where possible. The contents should include supply of water (approximately 4 liters of water per person per day – half drinking, half sanitation) for a number of people who may shelter for some days. These may be used by the school or community, if the school is utilized as a shelter. It should include communication devices. And as needed, hardhats, safety vests, and other protective equipment for response team members, shelter supplies, first aid supplies, privacy screens for latrines, and light search and rescue supplies if needed. You will need a plan for where to store and how to access any life-saving or health maintenance medications that students rely upon.

Each classroom should have a classroom *go-bag* or *go-bucket*. These evacuation supplies should be taken on field trips anywhere where there can be sudden-onset hazards. They can also be used in case of *lockdown* or *shelter-in-place* (where the bucket can serve as a make shift toilet).

Each room will also need an *emergency clipboard or notebook* that can be hanging on a hook at the exit, or placed inside the *go-bag*. This should be updated at the beginning of each school year and in preparation for school drills.

Student comfort kits can be requested from parents or guardians and kept in a duffle bag or backpack in homeroom classes, ready at the exit. These should include, for example, an emergency (space) blanket, a bottle of water, a high-energy (non-salty) snack, a family photo, and for younger children a small toy or something that will provide reassurance. Parent-teacher association may want to assist in assembling these items, particularly for those who many not be able to afford them. Parents or guardians can also be asked to donate emergency blankets to be kept in the emergency supplies container.

Use *emergency provisions checklist* form as a guide for gathering your supplies. First aid kit contents should be adjusted and be appropriate to the size of your school.

Preparedness checklists for schools

School administration checklist

Administrators: prepare your school and yourself

- ☐ Make sure that you are familiar with all of the *standard operating procedures* and know everyone's role and responsibility.
- ☐ Be sure that you can use the *emergency decision tree*, as a handy reference.
- ☐ Check that the *school emergency building evacuation route* map is posted in all offices.
- ☐ Check that school classrooms have current emergency clipboard including a copy of the *standard operating procedures*, roles and responsibilities in your standard emergency management system, and current class roster.
- ☐ Check that school-wide *emergency supplies* are in place and easily transportable (for evacuation or field trips).
- ☐ Check that the fire extinguishers or fire suppression materials are maintained, and staff know how to use it.
- ☐ In case of disaster before or soon after the end of the school day, be prepared to organize your school to provide assistance to students who may come to school as the nearest meeting point or *safe haven*.
- ☐ Make sure that the *student emergency contact cards* are up-to-date.
- ☐ Complete your own *family disaster plan* at home and with your childcare providers, if you have children.

Administrators: prepare your staff

- ☐ Meet with your school management committee to review and amend the *standard operating procedures for disasters and emergencies in schools* as necessary. Reach out to include representatives of parents or guardians, local community and public safety authorities.
- ☐ In case you are away from the school at the time of an emergency, or in case you have very extenuating circumstances and must leave before an *all clear*, be sure that you have two back-up persons on staff that are confident to lead in your absence.
- ☐ Plan with your staff for a flexible division-of-labour immediately after a disaster, consistent with standard emergency management plans in your area. Review the roles and responsibilities associated with each function, with your staff.
- ☐ Immediately following your school-wide simulation drill and be sure to evaluate the drill, learn from it, and review the school risk reduction and response plans again.
- ☐ Make sure that all of your staff is familiar with the *emergency decision tree*, and all of the *standard operating procedures*.
- ☐ Problem-solve with staff, students and parents or guardians, to be sure that every child with specific access or functional needs is included, and no one is left out.

Teachers' checklist

Teachers: prepare yourselves

- ☐ *School emergency building evacuation route* map should be posted in your room.
- ☐ *Classroom emergency supplies* are in place and easily transportable (for evacuation or field trips).
- ☐ Know the location of your fire extinguisher or fire suppression material and know how to use it.
- ☐ Complete your own *family disaster plan* at home and with your childcare providers, if you have your own children. The principal or designee will release staff members as the needs change. If you have very extenuating circumstances discuss these with your school head *now*, not during an emergency.
- ☐ Plan a quiet activity that students can do in the assembly area in the event of a real emergency or a drill.
- ☐ In case of a disaster or emergency, before or soon after the end of the school day, be prepared to respond and provide assistance to students who may come to school as nearest meeting point or *safe haven*.

Teachers: prepare your students

- ☐ Make sure that your students know the four rules for building evacuation: *do not talk; do not push; and do not turn back*. Students should know that if there is an earthquake when they are outside of a classroom (during break or lunch or if they are somewhere), they should exit with the nearest class and should not go back inside after they *drop, cover, and hold on*. If they are between classes, they should assemble in the outdoor emergency assembly area.
- ☐ Explain to students before drills what staff members do during emergencies.
- ☐ Early childhood classes should have evacuation ropes with one handle for each child. The rope will go through the middle of the group with each child holding on to a handle (handles are on opposite sides of the child in front and behind). Practice to make sure students stay together, holding on to the rope.
- ☐ Make modifications to be sure that every child with specific access or functional needs is included, and no one is left out.
- ☐ Review the *emergency evacuation routes*. Prepare four monitors who will work as buddies and lead the way, carefully checking to make sure that the route is clear. This is particularly of importance for classes on second floor or without easy access to open space outdoors.
- ☐ If you face earthquake risks, practice the *drop, cover, and hold on* drill, having students hold their position for 45 seconds. In tsunami risk areas, make sure that you also *count* and *evacuate to higher ground if the earthquake is strong* (hard to stay standing) *or long* (more than 4 seconds).
- ☐ Teacher in science labs and cooking classes should demonstrate to students how to extinguish any flames and isolate any hazardous materials in use. In shop classes, switch off the machines.

- [ ] Make sure that students understand *safe family reunification* procedures. Inform students that only their parent(s), guardian(s), or other adult(s) listed on their *emergency contact card* will be allowed to pick them up from school during an emergency. Explain the *request gate and reunion gate procedures*.

Teachers and students: prepare your parents or guardians

- [ ] Teachers are to pass out drill announcements, parent or guardian letters to their students to take home.
- [ ] Confirm with the parents or guardians that their *emergency contact form* is up-to-date, and explain the importance of the reunification procedures. Explain the *request gate and reunion gate procedures*.
- [ ] Reassure parents.

Emergency provisions checklist for schools

Administration office go-box

Description	Ready	Missing	Initials/Date
School disaster management handbook and plan binder	☐	☐	
Faculty and staff roster with phone numbers	☐	☐	
Student roster and class schedules	☐	☐	
Student medical information	☐	☐	
Student emergency contact list	☐	☐	
Important phone numbers	☐	☐	
Reunification forms	☐	☐	
School site map and floor plan	☐	☐	
Keys	☐	☐	
Megaphone	☐	☐	
Pens and notepads	☐	☐	
Masking tape	☐	☐	
Marking pens	☐	☐	
First aid supplies and medications	☐	☐	
Flashlight	☐	☐	
Whistle	☐	☐	
Emergency radio and batteries	☐	☐	

School emergency supplies package/bin

Description	Ready	Missing	Initials/Date
Water wrench, cups, water carriers	☐	☐	
Megaphone	☐	☐	
Staff/team vests	☐	☐	
Generator	☐	☐	
Shelter supplies	☐	☐	
Blankets or mats (student-supplied)	☐	☐	
Privacy screen (e.g. cardboard box)	☐	☐	
Two-way radios	☐	☐	
Sanitation supplies: soap and toilet paper	☐	☐	
Hard helmets for search and rescue team	☐	☐	
Leather gloves and eye protection	☐	☐	
Crowbar, wrench and screwdrivers	☐	☐	
Shovel	☐	☐	
Duct tape	☐	☐	
File box (for reunification forms)	☐	☐	
Snacks and long-lasting food (rotated into stock)	☐	☐	
Medical supplies (non-perishable)	☐	☐	

Classroom go-bag or shelter-in-place bucket for each class

Description	Quantities Ready	Quantities Missing	Initials/Date
One clean sheet			
One classroom first aid kit			
One flashlight			
One battery-operated radio			
Extra batteries			
One whistle			
Four emergency blankets (for cold)			
Four plastic rain covers			
Tissues			
Three marking pens			
Plastic bags size(?) and trash bags			
Pens and notepads			
Rope with handles (for young children to hold when evacuating)			
Supplies for student activities (optional)			

Classroom emergency clipboard or notebook

Description	Quantities Ready	Quantities Missing	Initials/Date
Current class rosters			
Injured/missing status report form			
Roles and responsibilities in your standard emergency management system			
Standard operating procedures instructions			
Your room number, sign and stick placed by the door, to be used for students to follow to evacuation and meet in assembly area			

First aid go-box

Description	Quantities Ready	Quantities Missing	Initials/Date
First aid kit (appropriate for size of the school)			
Existing patient medications log			
Blanket			
Sheet			
Note: Student prescriptions and other medications are kept separately in a secure location. Note who is responsible for bringing this to the vacuation site.			

Student comfort bags (family supplied)

Description	Ready	Missing	Initials/Date
Half a litre bottle of drinking water			
One high energy and long life snack			
Family photo and/or comfort note from parents or guardians to student			
Change of underwear or clothing			

ANNEX I

A QUICK GUIDE: THE PROCESS OF NATIONAL ADAPTATION AND LOCALIZATION OF DISASTER RISK REDUCTION KEY MESSAGES

Quick guide to national adaptation

Objective

To develop a set of action-oriented *Key messages for all-hazards household and family disaster prevention*, to form core content and a foundation for public awareness messaging, and for social and behaviour change, information, education, and communication materials, and curriculum development for risk reduction to build a culture of safety and resilience.

I. First steps in adaptation, localization and adoption of key messages

Save the Children and the International Federation of Red Cross and Red Crescent Societies (IFRC), as facilitating organizations, are supporting national disaster management organizations and education authorities to take the lead in this process, by following these steps.

Step 1: Meet with the national disaster management organizations to make a preliminary plan

Designated IFRC and Save the Children representatives meet with senior management of the national disaster management organizations to share the approach. Share the *Public awareness and public education for disaster risk reduction: key Messages* (First edition is available in 23 languages),[6] or if necessary, provide a translation of this document, and the *key messages*. In addition, request the supplementary messages and workshop materials from:

Martin Krottmayer: Martin.krottmayer@ifrc.org

Marla Petal: marla.petal@savethechildren.org.au

Discuss the background, approach and logical organization of the messages, based on global research. (Refer to the *Public awareness and public education for disaster risk reduction: key messages workshop* presentation).

Make the following decisions together:

i. **Agree on the geographic area for which the key messages will be adopted.** Usually these will be for national level, but in certain situations, states or province or regional messaging may be preferred.

ii. **Set the target language(s) for the messages.** A corresponding set in English would be appreciated, for international comparison purposes.

iii. **Draft a list of experts who will be invited to review the draft messages.** There should be at least 15 and not more than 35 national level subject-matter experts from the following fields:

- hydro-meteorological hazards
- geophysical hazards
- fire prevention and response
- health hazards
- other hazards, as needed (e.g. technological, agricultural, conflict)
- disaster risk reduction and response

6 English, French, Spanish, Arabic, Russian, Bosnian, Catalan, Croatian, Danish, Dutch, Finnish, German, Geek, Hungarian, Italian, Polish, Portuguese, Romanian, Slovenian, Ukrainian, Japanese and Korean

- community-based disaster risk management
- public health education
- target language experts
- disability and social inclusion experts (ideally from leading national disability rights organization)
- gender expert
- child protection expert
- communications

This group should include technical experts from key government agencies and academia (especially from the education sector, health and nutrition, agriculture, food security and child protection) and should include representation from key development sector working groups and humanitarian clusters, especially those leading in public education for disaster risk reduction. The group may also include key sub-national representatives.

iv. Set a date for a two-day workshop with the subject-matter experts.

Step 2: Prepare the key messages for review

a. Translation and formatting

Have the workshop package of key messages translated by a bilingual expert familiar with the subject matter. Seek conceptual rather than literal equivalents. Have the translation reviewed by a couple of trusted bi-lingual speakers familiar with risk communications locally and internationally. *Be sure to keep the definitions of each hazard at top of first page of the specific hazard messages*, and have these translated as well. Also, leave the icons in place at the top of each specific hazard sheet.

Format these in two sizes:

1. Regular A4 or letter-sized paper. One copy will be sent out to each participant, plus six to ten extra copies will be provided for workshop tables.
2. Use large font size – 14 to 18 points. Arrange for paper-size: A1 or A2 (or smallest A3). Make two copies of the all-hazards sections and one copy of the specific hazards sections for the workshop.

To prepare for the workshop, you will need to print the key messages workshop set (in three columns), see example presented below. On the poster-size version leave sufficient room under each item listed under the key messages column to place voting stickers or marks, and in the other blank column for notes.

Be sure that all of the messages retain their *numbers*. The all-hazards messages should start on the first page. **Each new hazard set should begin on a new page.**

Key messages (in English and translation)	Context-specific details (English)	Context-specific details (Translation)	[leave blank]

b. Comparison with nationally disseminated key messages

Assemble all key messages which are disseminated nationally by government agencies, the Red Cross or Red Crescent National Society, and other respected sources. Compare each of these messages with the ones presented at the workshop, and place an asterisk on the digital version of the workshop set of messages next to each of those that are also found in nationally disseminated materials. If there are any additional messages that are *not* found in the workshop set, or which are worded slightly differently, add these in to the most logical place (*in italics*). **This will help everyone to see how the communication already underway does (and does not) match with existing communications practices.**

II. National key messages workshop

Step 3: Plan the two-day workshop agenda and send out invitations and review packet to subject-matter experts

Plan the workshop agenda using the sample agenda below. **The first day is focused on the background and rationale behind the task, and focuses on *all-hazards family disaster risk reduction and resilience*. This includes household fire as everyone faces this hazard.** The reason for this is to help specific subject-matter experts come together and recognize the common messages that are core to all risk reduction and preparedness. It is very challenging to make people think about having separate sets of items for each hazard. It is much more productive to get people to think about the core things that apply to any and all-hazards. Thereafter, we will focus on few additional hazard-specific measures.

Send out the workshop invitation at least two weeks before the workshop, along with the workshop agenda and **a copy of the workshop version of the messages**. As advance homework, ask invitees to take some time to read this material. During the workshop participants will provide input for context-specific details and will be asked **to decide priority ranking as a must do, should do, may do or skip for each message.** Ask them to read the materials prior to the workshop and make notes. This will contribute to the workshop going more smoothly. Ask participants to bring their copy of the key messages with them to the workshop. Those who are unable to attend will have an opportunity to review the messages before these are finalized.

Sample agenda

Day one		
8:45–9:00	Registration	
9:00–9:15	Opening address	Key ministry partner
9:15–10:00	Introductions and workshop objectives	Lead facilitator (Key messages PowerPoint)
10:00–10:30	Prioritizing core messages:	Group (Must/Should/May/Drop voting markers)
Coffee break		
11:00–12:00	All-hazards family safety planning – refining contextual details Rotation session 1	Tables 1 and 2: Assessment and planning Tables 3 and 4: Physical and environmental protection Tables 5 and 6: Response capacity – skills and provisions
Lunch break		
1:00–2:00	Rotation session 2	Shift to next table
Coffee break		
2:30–3:30	Rotation session 3	Shift to next table
3:30–4:00	Wrap-up	Lead facilitator

Day two		
9:00–9:15	Introduction and quick over-view for day two	Lead facilitator
9:15–10:00	Prioritizing core messages	Group (Must/Should/May/Drop voting markers)
Coffee break		
10:30–11:30	Specific hazards: Refining contextual details Rotation session 1	Table 1: Hydro-meteorological hazards Table 2: Geophysical hazards Table 3: Forest fire hazards Table 4: Health hazards Table 5: Agricultural hazards Table 6: Other hazards, as needed
11:30–12:30	Rotation session 2	Shift to next table
Lunch break		
1:30–2:30	Rotation session 3	Shift to next table
Coffee break		
3:00–3:30	Presentation of key findings	Table spokespersons
3:30–4:30	Dissemination plan and next steps	Group discussion

Step 4: Prepare for the National key messages workshop

Print: Key messages set as explained in Step 2a.

Supplies required

- Ten extra sets of the Key messages workshop definitions and messages in A4 or letter size
- One full set of Key messages workshop definitions and messages in poster size – A1, A2, or A3 plus one extra set of all-hazards pages only.
- Blue tack or similar to put the posters up on the walls
- Six blank flip charts
- Markers for flip charts
- Pens: one per participant
- Large size post-it notes (big enough to write on), or meta cards
- Name tags, pre-printed with each person's first and last name and organization.
- A method to easily mark votes in three colours with either:

a. Small round coloured stickers (for voting) in three distinct and visible colours to represent **must, should and may** (approximately 100 points each for **must** and **should** and 50 each for **may**. This has also been done with the sticky end of small post-its, cut into tiny pieces.

or

b. Ten sets x four colours – these only need to last long enough for you to count them.

Room set-up

The room should be set-up with a projector and screen, and a table for facilitator(s) and supplies should be placed at the far end of the room. There should be a registration table at the front of the room. In the middle, there should be (ideally) round tables for groups of six. Ideally, there should be no more than six tables.

Before the beginning of day one, hang the all-hazards family safety plan message posters around the room, in sequential order, at eye level, so they can be easily read by participants of all heights. Before the beginning of day two, you will do the same with the hazard-specific key messages, grouping them by hydro-meteorological, geophysical, fire, health, and agriculture.

Place a parking lot poster at one end of the room.

Prepare the team

You will need one skilled and confident facilitator to guide the process. You should also have one person to handle registration and attendance, and other logistics (coffee breaks, lunch, supplies). There should be three persons who act as roving facilitators or participants at the tables. Once the tasks are set and understood, facilitation will only need a light touch, and a warm and encouraging environment.

Step 5: Conduct the National key messages workshop

Day One

Introduction

Use participatory processes to develop the participant's understanding of the content and approach to formulate action-oriented messages in straight-forward, easy-to-understand language, while making the reasons for these clear. The facilitator will explain the two-day agenda, using the Key messages introduction PowerPoint to explain the background. He or she will make clear that participants are here to build upon the evidence-based and consensus-based key messages work that has done before, both in their own country, and internationally, in order to develop an important foundational resource, that all of the represented agencies will jointly produce and support, and use as the primary reference for public awareness and public education for action-oriented risk reduction and resilience guidance for the household level. All participating agencies can use their logo to endorse the key messages developed.

Day one will focus on all-hazards family disaster risk reduction and preparedness. Day two will focus on the set of specific hazards faced in the country. At the beginning of day one and day two, everyone will first of all, prioritize the messages, by voting with their coloured marks on the priority level they think should apply to each key message, so that in the final version, the *must do* messages are at the top, followed by the *should do* and then the *may do* messages.

Thereafter, they will spend the rest of the day, hard at work, rotating through the three sections of messages: assessment and planning, risk reduction and Mitigation (i.e. physical, environmental, and social protection), and response preparedness (skills and provisions). Depending on the number of participants, there can be one or two tables working on each sub-set, and an optional one working on the definitions. Each group will start with a different section, and after an hour, rotate to the next section, building upon the work of the previous group.

Prioritizing the core messages for all-hazard family safety planning

Provide participants with stickers and/or pen(s) to prioritize the core messages that are appropriate for the context.

	Must do/very important
	Should do /medium priority
	May do / good practice, if feasible
	*Not necessary*/not relevant in this context or perceived as not being a priority

** Note: these colours can be changed based on colours available.

Participants will rotate along the various posters sticking one sticker per key message. At this point the contextual details can be ignored.

Refining contextual details

At the end of the voting session, facilitators should quickly tally the priority level for each core messages based on the distribution of votes and circles or write: *must, should or may* as appropriate, next to each. Then take the posters pages with the stickers on them off the wall and separate them into three different sections as follows:

a. assessment and planning
b. risk reduction, i.e. physical, environmental and social protection
c. response capacity, i.e. skills and provisions.

Ask participants to divide themselves evenly at the tables (ideally five to six persons per table). Ensure that no two people from the same agency are at the same table. Participants will work on refining the core message wording, and selecting and refining the contextual details for each message. They can focus on the *must do* messages first. Ask participants to read through the contextual detail, marking, deleting, adapting and changing based on discussion and agreement. It is particularly important to adapt these to be relevant and understandable for the local context. Messages may be combined for simplicity.

Encourage the group to confirm their understanding or the reasoning behind each one or to identify any questions that might require further research. Mention that it is also important for key experts, for example, child protection, to look at the messages from a child protection lens; a disability or gender expert from their perspective and ensure that all elements are included in each message when and where relevant.

Ask that participants with the neatest handwriting please write up the notes. Participants can use the blank space available on the posters, flipcharts and/or meta cards to record their notes and changes. Most importantly, ask them to write the corresponding message *number* next to each note, so that the editor can keep track of everything. After an hour they will be rotating to the next table.

Assign one roaming facilitator for every two tables, plus one lead facilitator – ideally someone very knowledgeable on the evidence-base for the key messages who is able to float between tables to see that the group is systematically considering each message, and contextual details, and discussing needed revisions. Take care not to over-facilitate, to allow ownership and engagement. At the end of the hour, ask one person to remain behind at the table for a few minutes as the groups rotate, to make sure that the notes are *all clear*, and that the next group can see what has been done, review that quickly, and move on to continue the work.

Day one wrap-up

At the end of the day, allow participants to get a feel for the work that was accomplished. Ask each group to provide some examples of the kind of contextualization that was done, some of the new messages added, any terminology discussed, and any messages deleted that were deemed inappropriate. Take stock to see how people are feeling about the work done, and commend and encourage them on their accomplishments. See what has been added to the *parking lot* list and cover these issues or postpone as appropriate.

Once complied, the facilitator should collect the information and provide it to the lead facilitator to safeguard these for the remainder of the workshop. The work is halfway through. Work on specific hazard messages will start the following day. In the first session everyone will vote again on prioritization of messages. The messages will then be refined using the same procedures, except that subject

matter experts will gather at separate tables, responsible for covering all of the specific hazards in their area, over three sessions. Generalists will move around, selecting three different groups to participate in.

Day two

Introduction

Begin with a quick review and ask what people think after their chats over dinner and breakfast, and with a night's sleep.

Prioritizing core messages

Quickly review the instructions, and get the voting session started. When this has been done, tally and mark the priorities.

Refining contextual details

Remove the posters and distribute them to the subject-matter tables based on the following categories:

- hydro-meteorological (cyclone, storm, flood, drought)
- geophysical (landslide, earthquake, tsunami, volcano)
- fire (forest fire)
- health/agriculture (pandemic, infestation), as needed.

Some groups have a lot to cover, and will have to pace themselves, and even divide into two to tackle the different sections: definitions, assessment and planning. The group may want to split into a couple of sub-groups. One group can work on the definition section. Others may split to cover the sections on: assessment and planning; risk reduction i.e. physical, environmental and social protection; and response capacity, i.e. skills and provisions. The facilitator will need to make sure that those with lots to cover (hydro-meteorological and geophysical) divide the work across the three rotation sessions.

The subject-matter experts will ensure the scientific accuracy of the message, while the public education specialists will help to ensure that the messages can be understood by the public. Remind participants to consider the messages using gender, inclusion, and child protection lenses.

At the end, ask a representative from each table to prepare and present back some key and important changes made and why. Are there any *parking lot* issues, remaining concerns, research gaps that should be noted? Make notes on the above to include in a brief final report of the workshop.

Congratulate group on a job well done.

Next steps and dissemination plan

Based on the discussion that has emerged over the two days, briefly review what is next in terms of compiling the inputs, sending it around for a final round of review and refinements, asking for agency endorsements and logos, and preparing for publication. Some hazards or details may require additional expert review. For example, some subject-matter experts were unable to attend, but may have important contribution, or someone might volunteer a colleague who did not attend but they realise will be a useful resource person for additional review.

Are there specific hazards that have not yet been covered, that should be added when they become available? How frequently should the messages be reviewed? Will the national disaster management organization lead this process in the future?

Ask the group for their ideas about how these messages can be used and disseminated, and what comes next? What format should the published messages take (ring binder? digital document? other?). What channels of communication can be used to test the messages for uptake and impact? How can behaviour change be measured? How and where can results be reported back, so that the messages can be further improved upon in the future? In some cases this review group decides that they need to meet again to develop a dissemination strategy, or they may suggest it is the role of another body.

Draft a quick list of next steps with time frame, and who will be responsible for what.

Wrap up with a summary activity, asking participants to provide a word or a phrase describing how they feel about the work they have done over the past two days.

IV. Finishing up

Step 6: Compile and edit inputs and circulate draft for final review

The facilitating organization will be responsible for ensuring all comments and changes are taken into account and a draft circulated for final review in both English and national language(s).

A *very* short introduction about the process (background, how to use the document, and agreed upon next steps) should be added. Confirm with the national disaster management organization, their ownership of this process, and articulate the plan to review and add to the messages as agreed. Add acknowledgement to the full list of the experts who participated in the review, including their position and agency affiliation (whether at the workshop, or in writing).

Step 7: Finalize, publish and disseminate the key messages

Produce the publication with an attractive layout and cover. Be sure to include and highlight the logos of lead government agencies, and research institutions, and acknowledge the other agencies endorsing the messages, as appropriate. Publish this and issue a press release. This is a major accomplishment and should be promoted as such. Follow up to make best use of this important document.

ANNEX II

A QUICK GUIDE: HOW TO USE THE MESSAGES WITHIN COMMUNITY ENGAGEMENT APPROACHES

Quick guide: community engagement and accountability

Community understanding, engagement, ownership and implementation of risk reduction actions is a core component of effective Red Cross and Red Crescent programming. Information shared with communities has the most impact when it is timely, relevant, accurate and tailored to the audience. And most importantly, when it is part of a comprehensive community engagement approach that enable continuous adaptation of messages and activities.

What is community engagement and accountability?	Community engagement is an approach to how we work and a set of activities that support risk reduction and response outcomes by encouraging and empowering communities to take positive action to prevent or reduce risks of hazards by: • Employing a variety of communication approaches and trusted channels to reach, influence, enable and engage communities with accurate, easy-to-understand information about recognizing, reducing and responding to hazards and risks through trusted communication channels. • Making sure this information is based on people's current knowledge, attitudes, practices and behaviour. This is more likely to be accepted and acted upon (check TOOL 1 and TOOL 2 for templates and questions for assessments, baselines and monitoring and evaluation) • Building on local capacity by listening to and using community feedback and ideas about how to promote safety and resilience action – it is important to build community ownership of the action. • Using engaging approaches to drive positive behaviours change, like community theatre or radio chat shows. • Setting up systems to collect, analyse and respond to rumours and inaccurate information as quickly as possible.
Why is community engagement important in disaster reduction and response?	Some lessons from previous experience shows: • As much as we try to provide solutions, it will be the communities who are the main implementers and leaders in promoting individual and collective action to address the hazard. • Building trust is essential. Once communities recognize us as a trusted source of advice, it will influence if they accept volunteers' advice and act on it. • Communities need to fully understand and embrace the recommendations. If not, they might refuse access to their villages and even attack volunteers and staff members. This is particularly a risk during epidemic outbreaks. • When rumours spread faster than the truth and contradict real information, it can stop people from protecting themselves and undermine our social mobilization efforts. • We need to check how messages are being interpreted by the communities. For example, the message *Ebola kills* led people to believe it was incurable and so they chose to die at home rather than go to a treatment centre, contributing to the spread of the disease. • Working with communities and getting trusted leaders on board mobilize communities much faster and more effectively than working exclusively through our own volunteers.

What do I need to remember in relation to community engagement?	• **Adapt to the local context:** While all messages need to align with approved messages issued by authorities, they should still be tailored to the local context, such as local perceptions, beliefs and practices (see TOOL 10). • **Change your messages to adapt to the needs of people as the response evolves:** To respond to the increasing knowledge of the population and the feedback they provide, as well as rumours and false information spreading in the area. • **Test your messages:** Any news materials and messages need to be tested with the community before being widely disseminated to ensure they are well understood and do not contribute to confusion or even potentially cause harm. • **Collect and analyse rumours and feedback regularly:** This is key to shaping your messages and communication (check TOOL 15 or the Communicating with Disaster Affected Communities New good practice guide: dealing with rumours in humanitarian response). • **Train staff and volunteers:** Not everyone is a natural communicator and some may need help to build up their communication, listening and feedback collection skills (check the TOOL 14).
Where can I get more help, templates, guidance etc.?	• Community engagement and accountability page www.ifrc.org/CEA: tools, templates and tips for rolling out community communication and accountability approaches and activities. • Check, in particular, TOOL 7 with more guidance and tools on how to develop a community engagement and accountability plan of action. • Also check the Community engagement and accountability FedNet library for additional training tools and resources.

Key community engagement tips

During emergencies and crisis in particular, public fear may rise and rumours can spread faster. Hence, it is important that we engage people and communities in discussing solutions and taking effective action to protect themselves, their families and their communities and respond to risks and hazards.

1. **Do not only tell people what to do:** Recognizing **the community as experts is key to helping them in reducing risks.** Telling people what to do, however scientific, does not always work. Engaging them through two-way communication is more effective than taking the discussion from a top down *do not* to a partnership of *can* with communities is key.
2. **Get peers and leaders to talk:** People are more likely to pay attention to information from people they already know, trust and who they feel are concerned about their wellbeing. People live in unique social-cultural contexts, with relationship dynamics, and their own perception of risks, and trusted sources of advice, that influence if they accept advice or not.
3. **Disseminate accurate information immediately:** Disseminating information about an epidemic or another hazard immediately will help mitigate concerns and promote prevention actions.
4. **Promote awareness and action:** Action-oriented risk communication and community engagement typically contains information targeted to communities, including:
   a. an instruction to follow, for example, if infected, go for treatment immediately
   b. a behaviour to adopt, for example, wash your hands frequently to avoid transmitting the bacteria, check the health promotion material regularly
   c. a response to take, such as, going for treatment, following guidance on where and when to access services, i.e. treatment is free of charge and available at health facilities.
5. **Establish participation and feedback approaches:** Asking people what they know, want and need, and involving them in designing and delivering activities improve the effectiveness of our community interventions and sustain the changes we promote. It is important to give opportunities and open channels of communication for people and communities to ask questions and debate issues of concern.
6. **Ask for feedback:** Feedback helps Red Cross and Red Crescent shape communication and programmatic efforts. For example, if communities are asking lots of questions for example, about the risk of a disease to children, it is important we address those concerns through all our social mobilization activities. Feedback provides an early warning system that allows issues to be resolved quickly, before they get worse. The Red Cross and Red Crescent also has a responsibility to listen to and respond to complaints – even if we cannot address some of them, people still appreciate being listened to and acknowledged.
7. **Test your approach:** Pilot-testing messages and materials with communities' aims to ensure that messages are understandable, acceptable, relevant and persuasive. It will also help prevent the dissemination of either meaningless or potentially harmful information. It should also be noted that too much dissemination might have adverse effects.
8. **Accountable to those we seek to help:** One way to achieve greater accountability to the communities we work with is a more systematic and coordinated approach towards communicating with at-risk communities and acting on their feedback to us, i.e. people might not agree and complain about certain volunteers' activities.

9. **Changing behaviours takes time:** Telling people to go for treatment in case of symptoms is not enough during an epidemic – we need to understand why they do certain things and what the barriers are to safer practices and sustain our communication with them based on this analysis. It is key that we analyse (if available research has been done) or gather information on peoples' knowledge, attitudes and practices and offers innovative, engaging tools to support prevention and response programmes.
10. **Building public trust in the Red Cross and Red Crescent**: Open, honest communication is a mark of respect, which builds trust between the Red Cross and Red Crescent and communities.
11. **Be open, honest and timely:** Communicate clearly and timely what we know or not know about the disease and focus on the action that people and communities can take to tackle the disease.
12. **Stay informed on the latest news and work with others:** approaches, recommendations and information may change as more is learned about a hazard or risk. Check regularly information coming from ministries or other organizations like OCHA, WHO and UNICEF. It is also important to make sure information shared by the Red Cross and Red Crescent does not contradict the government and partners' information as this only adds to confusion and mistrust in communities.
13. **Red Cross cares:** It is easy for people affected by an epidemic outbreak or living in extreme poverty to assume society has forgotten about them. Community engagement strategies can have powerful psychological benefits.
14. **Use new and innovative ways of communicating with people and communities:** The explosion in access to mobile phones, the Internet and social media has changed the way people communicate. Communication is no longer top down – people can speak publicly and directly with and about the Red Cross, and they expect us to listen and engage them in all we do (check TOOL 8 for more tips on the communication channels).

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This current version of the *Public awareness and public education for disaster risk reduction: action oriented key messages for households and schools* has been developed through wide consultation with renowned subject matter experts globally in the different hazard categories to ensure a sound and widely recognized basis of actionable, evidence-based risk reduction and preparedness messages. Over a period of nearly two years, the key messages have been reviewed for integrating climate change messages, sensitized on gender and diversity and mainstreamed for veterinary reflections. The extensive inputs were compiled and aligned in continued discussions with subject matter experts. In order not to miss out on thanking any individual expert from academia, international organisations, nongovernmental organizations and technical networks we would like to provide a general appreciation for everybody who contributed to this new edition. We also thank our editor Aradhna Duggal and the layout/design expert Rob Wilson.

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The Fundamental Principles of the International Red Cross and Red Crescent Movement

Humanity The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

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