GUIDE FOR PLANNING MASS EVACUATIONS IN DISASTERS

CCCM CLUSTER
Supporting displaced communities

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DEVELOPMENT AND ACKNOWLEDGEMENTS

This Guide provides practical guidance on developing mass evacuation plans for disasters, bringing together emergency planning and humanitarian considerations. It builds upon the "Comprehensive Guide for Planning Mass Evacuations in Natural Disasters (MEND Guide)", published in 2014 by the Global Camp Coordination and Camp Management (CCCM) Cluster. However, much has changed in the intervening decade.

The world has witnessed a dramatic increase in the frequency and intensity of climate-related hazards, leading to more frequent and complex disasters requiring mass evacuations. Furthermore, there is a growing recognition of the critical importance of community engagement and empowerment in disaster preparedness and response, including evacuation planning.

This revised Guide addresses these evolving realities. It retains the core technical content of the original MEND Guide, which was developed in consultation with a Steering Committee comprising representatives from governments (Cuba, Cyprus, Iceland, Italy, Japan, Malta, Nepal, Portugal, Sweden, United Kingdom, United States of America), international organizations (IOM, UNHCR, UN OCHA, IDMC, IFRC, Global Protection Cluster), and academia (Professor Duncan Shaw, Warwick Business School; Elizabeth Ferris, Brookings Institution). The original MEND Guide, along with its accompanying annexes on Evacuation Planning and Early Warning Systems, Information Management and Public Information, Components of a National Emergency Law relating to the evacuation cycle, and Evacuation Shelter, informed numerous mass evacuation planning efforts and trainings for government officials in multiple countries.

This revised edition features crucial updates:

- **Emphasis on Climate Change:** The Guide explicitly acknowledges the escalating impact of climate change on disaster risks and evacuation needs.
- **Community Engagement:** It integrates the principles of community engagement and empowerment throughout the planning process, recognizing the importance of local knowledge and ownership.
- **Enhanced Protection:** A new Checklist for considering GBV and other protection risks in mass evacuation planning has been added, reflecting a heightened commitment to safeguarding vulnerable groups during evacuations.
- **Updated Structure and Resources:** The Guide's structure has been streamlined for improved usability, and new examples and links to external technical resources have been incorporated.
- **Refined Terminology and Revised Title:** The Guide has been renamed to "Guide for Planning Mass Evacuations in Disasters" to reflect the reality that disasters are not natural events, but a direct consequence of the interaction of hazards with human vulnerability and other complex societal factors. Disasters can be triggered by natural hazards (e.g., earthquakes, volcanic eruptions, hurricanes, flooding), the intensity and frequency of which are increasing due to climate change, as well as by man-made hazards (e.g., chemical, technological, violence or oil spills).

This Guide aims to provide practical guidance on developing mass evacuation plans for disasters, bringing together emergency planning and humanitarian considerations. It was originally developed following the request of several countries and national disaster management authorities.

The pilot version – *the Comprehensive Guide for Planning Mass Evacuations in Natural Disasters (MEND Guide)* – was published in 2014, a collective effort initiated by the Global Camp Coordination and Camp Management (CCCM) Cluster. Various tools were later developed in complement, including training and simulation exercise materials, operational guidance, and technical annexes. These, and the pilot Guide, were used to support mass evacuation planning efforts and trainings to government officials in multiple countries.

The Guide was revised in 2024, based on experiences from this implementation. The technical contents remain as recommended by the original Steering Committee. The structure of the Guide was updated, to support its operationalization, and new examples and links to external technical resources added. Greater consideration has been given to how climate change intensifies climate-related hazards and scale of disaster, relating to the need for evacuation. Gender, age, and disability inclusion considerations were updated throughout, alongside a new **Checklist for considering GBV and other protection risk mitigation in mass evacuation planning.**

A Steering Committee contributed to the development of the pilot version. This included representatives from governments (Cuba, Cyprus, Iceland, Italy, Japan, Malta, Nepal, Portugal, Sweden, United Kingdom, United States of America), international organizations (IOM, UNHCR, UN OCHA, IDMC, IFRC, Global Protection Cluster), academia (Professor Duncan Shaw, Warwick Business School; Elizabeth Ferris, Brookings Institution), and the European Commission's DG ECHO, which funded the first pilot.

Thanks are given to all those who gave their time for this revision, including: to the members of organizations of persons with disabilities who gave feedback, to government officials from, and IOM staff working in, Bangladesh, Fiji, Haiti, Iraq, Mauritius, Papua New Guinea, Philippines, Vanuatu, and Southern Africa, Latin America, Caribbean, and Asia Pacific regions. The Global CCCM Cluster would like to thank the Safe from the Start initiative of the Bureau of Population, Refugees, and Migration (PRM) of the US Government and the IOM Migration Resource Allocation Committee (MIRAC) who generously funded the revision.[1]

A critical change in this second edition is the renaming of the Guide from its original title of 'MEND' to the Guide for Planning Mass Evacuations in Disasters. Some hazards are natural (e.g., earthquakes, volcanic eruptions), with the intensity and frequency of climate-related hazards increasing due to climate change (e.g., hurricanes, flooding). Hazards can also be man-made (e.g., chemical or oil spills). When natural or man-made hazards impact a community, they may result in a disaster – but the disaster itself is not 'natural'. Whether or not a disaster occurs after a hazard, and its extent, depends on the preparedness and vulnerability of a community.[2]

This document was developed by the consultant Kate Holland as lead author. Revision coordinators of this edition were Nicholas Bishop and Amàlia Torres from IOM.

1 The CCCM Cluster is an Inter-Agency Standing Committee coordination mechanism that works alongside communities, authorities, and aid providers to ensure that people affected by displacement can access life-saving assistance and protection and identify paths to solutions. It is globally co-led by UNHCR (for conflict-induced) and IOM (for disaster) internal displacement situations.

2 See: UNDRR's #NoNaturalDisasters explainers.

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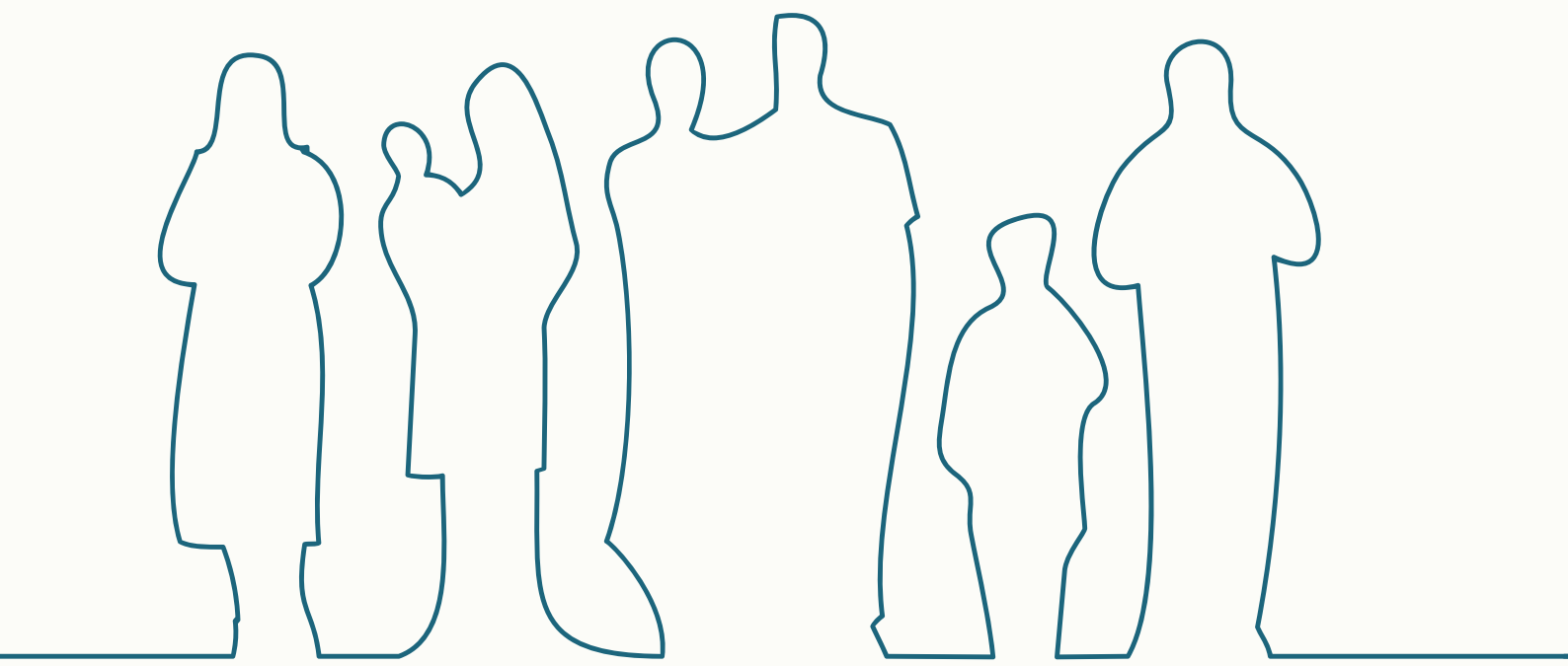
Homes located close to the White Nile submerged due to flooding in Bor, South Sudan. Every year, heavy rains trigger flooding, causing massive destruction and displacing thousands of residents. © IOM 2020/Liatile Putsoa

INTRO DUC TION



0.1. CONTEXT

According to the IPCC, over 3 billion people live in areas impacted by the changing climate.[3] Annually over 20 million people have to leave their homes to seek safety from the threat of climate change, environmental degradation, and disasters.[4]

Hazards that may threaten or impact communities, causing disasters, include weather (hydrometeorological) events such as cyclones, floods, droughts, and increasingly heatwaves. Others include wildfire, sandstorms, volcanic eruption, earthquakes, and biological, geophysical, environmental, and technological hazards.[5] Climate change is intensifying the frequency, severity, and unpredictability of climate-related hazards, and extreme weather events such as tropical cyclones, floods, and wildfires are becoming more common and devastating. Those who are already most vulnerable, often due to socio-economic factors, are disproportionately affected.[6]

Mass evacuation may be necessary in an emergency to save lives, if the preferred option of sheltering-in-place is not advisable. Taking proactive preparedness measures can help save lives, and reduce individual, community, and economic losses and damage caused by disasters. Planning for evacuations, with plans able to be quickly adapted to a specific situation, is critical to effectively mobilize and coordinate actors and resources, manage the safe and timely movement of people to safer locations, and meet emergency needs for shelter and assistance. Affected people should be consulted in planning, kept informed, and supported before, during, and after the evacuation.[7]

While evacuations are conducted to save lives, people may face risks due to their displacement. Psychological and social harm can be caused by evacuation, particularly where evacuees are unable to return to their original homes and communities.[8] Poor management of evacuations can lead to resentment of government institutions which may in turn decrease the ability of emergency management organizations to act effectively in the future.[9]

Well-planned, well-timed, and well-managed evacuations can help minimize negative impacts on people and communities, and aid recovery – more and more needed, as the climate crisis exposes often already-vulnerable communities to more frequent and extreme hazards.

3 IPCC, 'Summary for Policymakers' In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, 2022.

4 IDMC, Global Report on Internal Displacement, 2021 and IDMC, Global Report on Internal Displacement, 2023.

5 For more on hazards, see: https://undrr.org/terminology/hazard and UNDRR, Hazard Information Profiles, 2021.

6 IPCC, Climate Change 2022: Impacts, Adaptation, and Vulnerability – Summary for Policymakers, 2022.

7 Government of New Zealand, 'Section 30 – Mass Evacuation', The Guide to the National Civil Defence Emergency Management Plan, 2015.

8 Whiteford and Tobin, 'Saving Lives, Destroying Livelihoods: Emergency Evacuation and Resettlement Policies in Ecuador', in Castro & Springer (eds.), Unhealthy Health Policies: A Critical Anthropological Examination, 2004, p.189-202.

9 New Zealand Ministry of Civil Defence and Emergency Management, Mass Evacuation Planning – Director's Guidelines for Civil Defence Emergency Management (CDEM) Groups, [DGL 07/08], Version 1.0, 2008.

0.2. PURPOSE AND SCOPE

The aim of this Guide is to serve as a reference to assist planning bodies at national, regional, and local levels to develop or review evacuation plans to prepare for disaster-related displacement, in accordance with emergency management principles. Some actions may also be applicable to planning for evacuation of smaller groups of people. It may be used to develop evacuation plans for individual or multiple hazards. It is applicable to government-led mass evacuation planning.

The Guide was initially developed following requests for support, with input from a Steering Committee of representatives from government authorities, international organizations, and academia.

This Guide includes **considerations and best practices from a range of sources and countries.**

It provides a **generic template for creating an evacuation plan,** to be adapted to the context.

Note: Different hazards and their risks may require different courses of action. Evacuation plans developed from this Guide should be fully contextualized. Risks faced by populations may vary according to the type of hazard, resources, knowledge and coping strategies, and characteristics and vulnerabilities of different groups and individuals. Different hazards may result in different displacement patterns,[10] impacting when and how people move to find safety, and support needed.

This guide does not cover evacuations in situations of conflict, or permanent relocations.

For guidance on humanitarian evacuations in situations of disaster or conflict, see:

- UNHCR, 'Guidance Note 9 – Humanitarian Evacuations' from Handbook for the Protection of Internally Displaced Persons, 2007.
- UNHCR, Humanitarian Evacuations in Violence and Armed Conflict, 2018, Internal note.
- NRC, Considerations for planning mass evacuations of civilians in conflict settings, 2016.

For guidance on planning permanent relocations to protect people from disasters see:

- UNHCR, Brookings Institution, Georgetown University, Guidance on Protecting People from Disasters and Environmental Change through Planned Relocations, 2015.
- IOM, UNHCR, Georgetown University, A toolbox: Planning Relocations to Protect People from Disasters and Environmental Change, 2016.

10 E.g., sudden onset events may mean people leave their homes in groups, with families remaining together. Slower-onset hazards (where early warning is issued) may stagger evacuations over time, breaking up communities but allowing people to move possessions with them to safer locations.

0.3. HOW TO USE THIS GUIDE

Use of the Guide

This Guide is intended as a reference for planning bodies at national, regional, or local levels who are undertaking planning for mass evacuations. It can be used to plan for individual or multiple hazards.

The main intended users of the Guide are **government or local authority personnel responsible for evacuation planning,** and international or national organizations supporting evacuation planning.

It may be used at national or local level to develop mass evacuation plans, analyse and revise existing plans, or as an accompaniment to trainings and simulation exercises on mass evacuation.

It may also be used as a **reference tool** by government, international, and national organizations for preparedness work. Or **by actors working in displacement sites or areas with high displacement,** to understand evacuation planning concepts, and work with communities and local authorities to include displacement sites to existing evacuation plans, or develop very localized plans.

The Guide is accompanied by the following documents, which may be used to support planning:

- **Template for a mass evacuation plan** (to be used with Section 3 – Content of a plan)
- **Checklist for considering GBV and other protection risks in mass evacuation planning**
- **Simulation Exercise package** and **Training package** [on request][11]
- **Annex on Evacuation Shelter** [draft at time of writing, available on request]

Additional resources

Users may find it helpful to familiarize themselves with other guidance and examples of national plans. This may help better understand evacuation planning, and how to contextualize this Guide.

Key resources

- Mass evacuation – Guidelines for planning, International Organization for Standardization.[11]
- Evacuation Planning Handbook and Evacuation Planning Quick Guide, Australia.[12]

Examples of government mass evacuation plans from the region of focus may be helpful to consult. These can usually be found online.

Other resources and examples can be found throughout this guidance.

11 The simulation exercise package and training package are internal to IOM. Support for their use can be available on request, with materials to be adapted to the context. Contact: support@cccmcluster.org.

12 International Organization for Standardization, 'ISO 22315 – Societal security – Mass evacuation – Guidelines for planning', 2014, reviewed 2021.These guidelines have also been used by governments to support evacuation planning. The main author participated in the Steering Committee for the pilot Guide.

13 Australian Institute for Disaster Resilience, Evacuation Planning and Evacuation Planning Quick Guide, 2023.

Examples of past use of the Guide

VANUATU | National evacuation plan development

The Vanuatu National Disaster Management Office with the support of IOM and UNDAC/OCHA used the pilot Guide in 2015[13] to develop its guidelines for National Mass Evacuation in Natural Disasters.[14] The process of development[15] included: initial consultations at national level with actors responsible for aspects of evacuation management; conducting of tabletop exercises with responsible officials to understand existing protocols and identify gaps; consultations at local authority (island) level; and consideration of community-based disaster risk reduction. Two other national guidelines were developed at the same time, for evacuation centres (see above).

PHILIPPINES | Local training and simulation exercises

Starting in 2015, the pilot Guide and its associated materials have been used to conduct training and simulation exercises[15] to support preparedness. Participants have included local authority, fire service, and police representatives. Efforts have included: multi-day trainings and skills development for evacuation planning; development of evacuation plans bringing together municipality experiences with the recommendations of the Guide; and simulation exercises in which actors responsible for evacuation management can test evacuation and contingency plans.

CARIBBEAN | Regional analysis

The pilot Guide was used as a framework for a study of regional and national evacuation-related policies, strategies, and practice in the Caribbean states.[16] The findings and recommendations from this analysis were targeted to help inform the work of government officials and other stakeholders on evacuation planning.

14 National Advisory Board on Climate Change and Disaster Risk Reduction, Government of Vanuatu. 'Guidelines developed to assist Disaster Evacuation'.

15 Global CCCM Cluster, 'Preparedness in Vanuatu', in CCCM Case Studies 2016-2019 – Chapter 4: Preparedness, 2019.

16 At the time of writing in 2024, after experience of multiple evacuations due to volcanic eruption, the Government of Vanuatu is intending to review and update these guidelines (a recommended good practice).

17 IOM, Report 'Workshop and Simulation Exercises in Borongan City, Eastern Samar', July 2015.

18 IOM, Evacuations and Disaster Risk Reduction in the Caribbean, 2021.

Considerations for national or local evacuation planning

This Guide can be used at national, regional, or local level, to develop plans for single or multiple hazards. Identifying the appropriate level of detail (and existing policies) is an important first step.

Note: National evacuation guidance and local evacuation plans often have different formats. National guidance usually sets overall responsibilities and requirements for evacuation processes (based on legislation) and may be lengthy. Local evacuation plans contextualize national guidance (with local risk assessments, population profiles, and stakeholders), detailing operational steps and responsible actors. These plans are usually short – able to be followed easily in an emergency.

PHILIPPINES and AUSTRALIA | National guidance and local evacuation plans

In the Philippines, national policies and legislation set the framework for disaster risk reduction and management in the country. A national Disaster Preparedness Manual for City and Municipal Local Government Units[17] sets out practical requirements and guidance. This includes the requirement for local authorities to develop localized Evacuation Plans and includes standards for evacuation management.

In Australia

National policies and guidelines for disaster management and preparedness include a national Evacuation Planning Handbook. At regional (state) level, further guidance is available based on national documents. Queensland state has a Manual on Evacuation Responsibilities, Arrangements and Management.[18] This guides local authorities to develop (and annually review) evacuation plans, and sets out specific context, legislation, responsible actors, and other key stakeholders in the region.

Local authorities have responsibility for conducting evacuations. Local Disaster Management Plans include evacuation plans, following state- and national-level guidance. See examples of Queensland local authority Evacuation Sub Plan (showing responsible actors)[19] and Evacuation Sub-Plan (including a checklist).[20]

In addition, a national Evacuation Centre Management Handbook, Field Guide, and other resources have been developed by the Australian Red Cross with the government. These include templates for local plans. See example Queensland local authority Evacuation Centre Management Sub-Plan.[21]

19 Government of the Philippines, Local Government Unit Disaster Preparedness Manual for City and Municipal LGUs, 2018. Under national frameworks: Government of the Philippines, NDRRMC, National Disaster Risk Reduction and Management Plan (NDRRMP) 2020-2030, 2020.

20 Australia, State of Queensland – Queensland Fire and Emergency Services, Evacuation: Responsibilities, Arrangements and Management Manual – M.1.190, September 2018.

21 Australia, Rockhampton Regional Council Queensland, 'Local Disaster Management Plan – Evacuation Planning Sub Plan', v1.1 June 2021.

22 Australia, Cloncurry Shire Council Queensland, 'Local Disaster Management Plan – Evacuation Sub Plan', v1 October 2021.

23 Australia, Rockhampton Regional Council Queensland,, 'Local Disaster Management Plan – Evacuation Centre Management Sub-Plan', v1.2 July 2023.

0.4. RESPONSIBILITY FOR EVACUATION PLANNING

Developing evacuation plans is often the responsibility of a country's Disaster or Emergency Management Agency,[24] sometimes implemented by a civil protection body. Those responsible should be familiar with existing emergency management policies and guidelines that the plan needs to align with.[25]

Planning may be done by an emergency management or evacuation committee, or responsibility assigned to an individual. Any committee should include key stakeholders with responsibilities in an evacuation. Other stakeholders may need to be engaged during planning.

Actors involved in evacuations may include: emergency services, civil protection agencies, national hydrometeorological agencies (for weather forecasts, emergency broadcast, early warnings), local disaster response workers, public service providers, civil society organizations, private sector, the media (for communication), as well as disaster-affected and host communities. Engaging key stakeholders is essential to benefit from local knowledge, expertise, and resources, and ensure ownership and understanding of their roles in an evacuation. Those responsible for planning should also work with community representatives who represent the diversity of the community.

Burundi, Buterere, Members of the Community Committee for DRR register community members to identify missing persons during a simulated Early Warning Mechanism exercise on 2024/08/20. © IOM/Alexander Bee

24 Tasked with planning and implementing emergency response and ensuring overall protection of disaster-affected people.

25 Australian Institute for Disaster Resilience, Evacuation Planning, 2023, p.8.

0.5. CONDUCTING A PLANNING PROCESS

A mass evacuation plan must be fully contextualised – based on specific variables in the country or region. Some countries develop national guidance on evacuation planning, complemented by operational evacuation plans developed by responsible local authorities.

Note: A written plan should be the outcome of a planning process. A plan is only useful if all responsible actors are aware of (and agree to) their roles and can act on them in an emergency.

The process of developing or revising a mass evacuation plan should:

- Be led by the responsible national government or local authority body.
- Involve all other key stakeholders.
- Involve community engagement in decision-making and planning processes.
- Involve minimum preparedness actions and regular training on the plan.
- Have sufficient financial resources available to support the process.
- Allow sufficient time, including for any initial work or analysis to be done or compiled.

Community members, leaders, and local partners come together to plan hazard risk mapping in Uhi, Edo State, Nigeria. © IOM 2024/ Agara Barinedum

Steps in a planning process

This is an example of an emergency planning process,[26] showing the steps that may need to be taken to compile information, develop a plan, test or trial it, and ensure it is then kept updated.

The diagram can be used to help draft a workplan to either develop or review a mass evacuation plan.

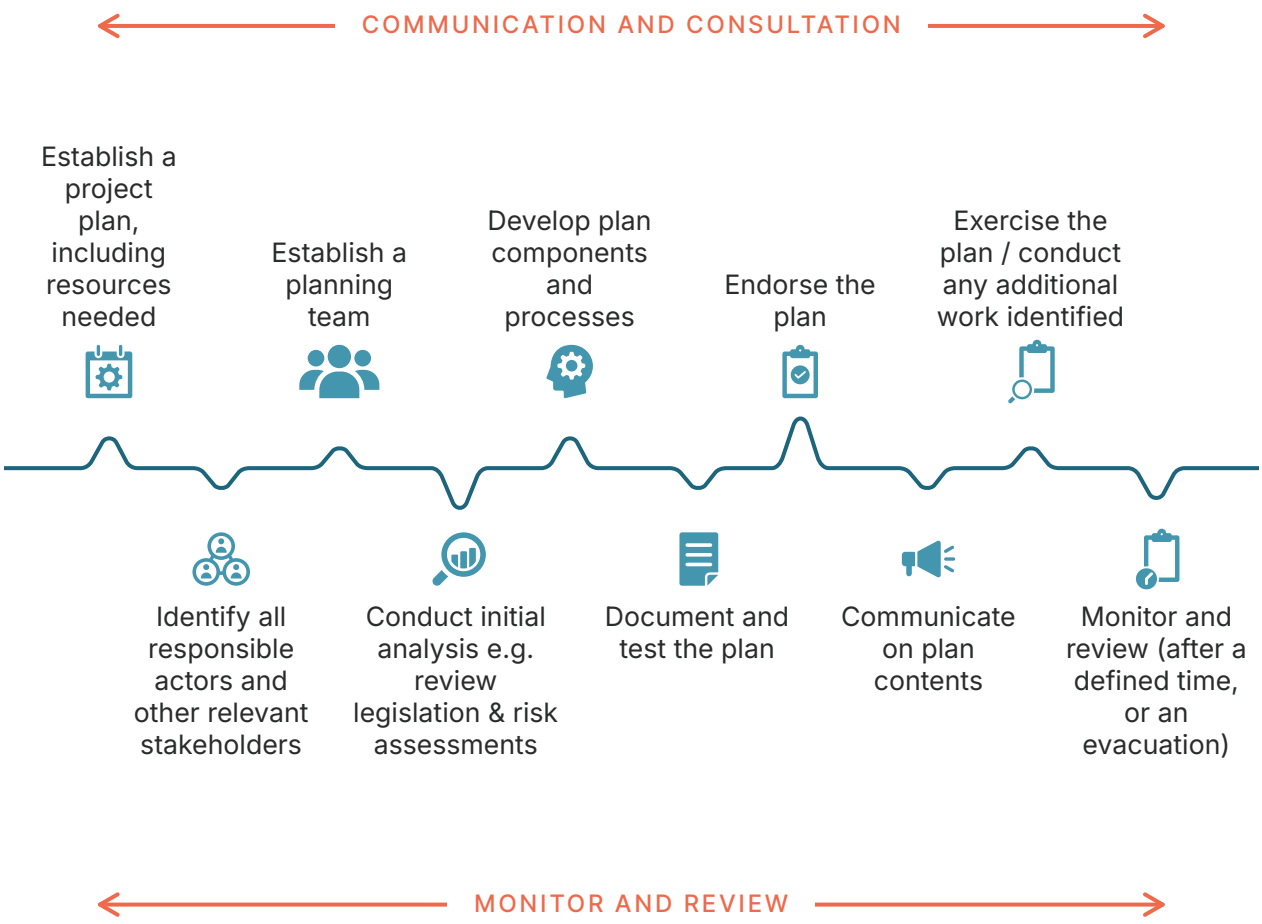
Note: Plans act as guides to what should happen. It is helpful to consider during plan development that in fast moving, high uncertainty evacuations, the plan's implementation may be different.

Review after action

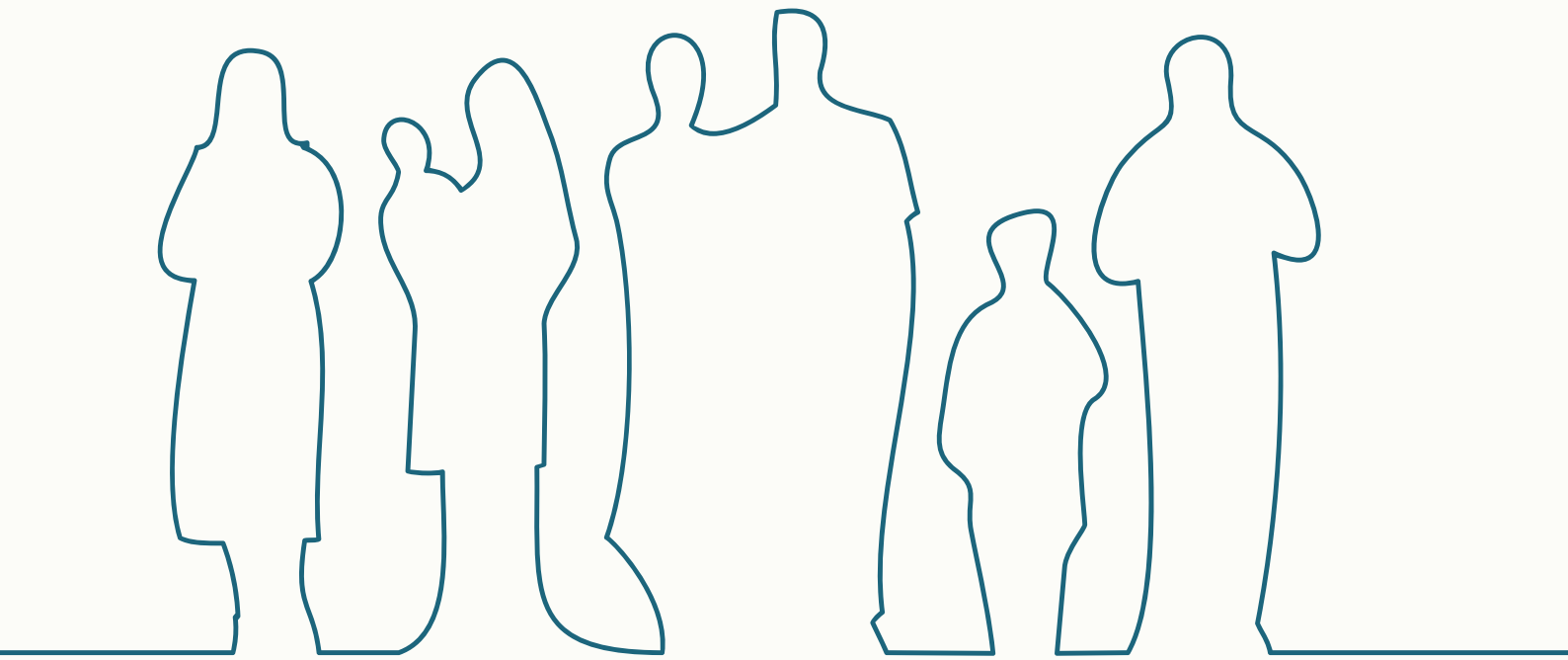
As for any operational plan, it is useful to review a mass evacuation plan after it has been used in an evacuation.

A review of the plan may involve key stakeholders (those identified in the plan as having responsibilities in an evacuation) and engagement with the affected community. This process can help identify how easily or closely the plan was followed, elements which were adapted, and any changes needed to the plan in readiness for future emergencies.

Figure 1. Steps in project planning, communication, and review process



26 Adapted from: Australian Institute for Disaster Resilience, Evacuation Planning, 2023, p. 7 Figure 2.



EVACUATION PHASES

1.1. TYPES OF EVACUATION

Evacuation

The rapid movement of people away from the immediate threat or impact of a disaster to a safer place. It is commonly characterized by a short time frame, from hours to weeks, within which emergency procedures need to be enacted to save lives and minimize exposure to harm.[27]

Mass Evacuation

For this Guide, mass evacuation implies the evacuation of whole communities, neighbourhoods or geographical areas. The scale and complexity creates the potential for emergency response capacity in a jurisdiction or country to be overwhelmed and the necessity for coordination across one or more jurisdictions to affect the evacuation and sheltering of evacuees.[28] **Evacuation is a strategy to reduce loss of life or lessen the effects of a hazard on a community. It should not expose people in transit to more danger than if they had sheltered in place.**

Shelter-in-place

Means finding a safe location and staying there until the threat has passed or until told to evacuate.[29] This can be recommended for some or all people when it is considered safer to remain than evacuate. Even when evacuation is recommended, some people may choose to shelter-in-place (often where they live), e.g., to protect homes or livestock, because they believe evacuation is unsafe, or because warnings have not been received by or understood.

Types of evacuation

1. **Pre-warned/pre-emptive evacuation:** where a community has been given warning of the impending hazard impact, and evacuation can be facilitated according to a plan. E.g. flood.
2. **Immediate evacuation:** where a rapid onset hazard causes a threat with no or limited opportunity to warn affected communities, and requires immediate protective movement. E.g. cyclonic storm where wind velocity increases rapidly, earthquake, gas explosion.[30]

Total, partial, and phased evacuations

- **Total evacuation:** everyone in the affected area is recommended or directed to evacuate
- **Partial evacuation:** only some of the affected communities are evacuated. E.g., only residents living in low-lying areas impacted by flood waters, or people who cannot easily evacuate if the situation rapidly worsens (e.g., hospital patients, persons with disabilities).
- **Phased evacuation:** communities are recommended or directed to evacuate at different times. E.g., due to slow onset of a hazard or avoid transport route congestion.[31]

27 Definitions of 'evacuation' used by different authorities may include details about the evacuation process and other planning assumptions, such as that evacuation is a short-term and temporary measure. E.g., "The temporary movement of people to a safer location in order to mitigate the effects of an emergency or disaster on a community" (Emergency Management Australia, 2005).

28 An alternative definition of mass evacuation adapted in part from Los Angeles Operational Area Alliance (2011): "The potential for emergency response mechanisms to be overwhelmed due to an inability amongst local authorities to effect evacuation and sheltering solely within their own jurisdiction and using their own resources, thereby requiring coordination with one or more other jurisdictions."

29 The term 'shelter-in-place' is used to instruct people to stay in their current location until a danger has passed. It may be used in the situation of a security threat, e.g., where people are told to remain inside a building. Here it is used for a hazard threat, where 'shelter-in-place' is an instruction to seek shelter and remain rather than to evacuate an area.

30 Australian Institute for Disaster Resilience, Evacuation Planning, 2023.

31 Australian Institute for Disaster Resilience, Evacuation Planning, 2023.

Evacuation approaches

Mandatory evacuation

Is ordered (directed) by authorities when it is judged that the risk to a population is too great to allow them to remain where they are, and where sheltering-in-place would likely create a higher level of risk. This places a duty of responsibility on authorities to ensure that people have the information and assistance needed for safe and timely evacuation and that evacuees are cared for.[32]

Advised (recommended) evacuation

An official evacuation advisory message is issued, but people have the option to remain. An advisory may precede a mandatory order if the level of threat and risk of sheltering in place increases. Authorities are usually seen to have a responsibility to facilitate safe and timely evacuations for those who need assistance.

Spontaneous (self-initiated) evacuation

When people evacuate due to actual or perceived risk using their own means (self-evacuation) without, or before, official warnings to evacuate. This may include people who leave areas outside a designated evacuation zone (also known as "shadow" evacuations).[33] People manage their own movement/transportation. They may have their own shelter arrangements or may rely on evacuation centres and support.

This Guide mainly focuses on the decision, warning, evacuation, and emergency shelter and relief phases of an evacuation. Considerations for the pre-threat (preparedness) and post-evacuation (return and recovery) phases are briefly outlined.

The pre-threat (preparedness) stage is vital to planning and successfully implementing an evacuation. How an evacuation is implemented can influence the speed of recovery.

Rising waters of Lake Tanganyika engulf a nautical center in Bujumbura, Burundi, leaving a trail of destruction in its wake. Flooding in Bujumbura has intensified due to the effects of climate change, with increased rainfall and rising lake levels displacing communities and threatening livelihoods. © IOM 2021/Armel Nkunzimana

32 Adapted from: New Zealand National Civil Defence and Emergency Management, Mass Evacuation Planning Guideline Draft v1.0. Appendix 2, 2008.

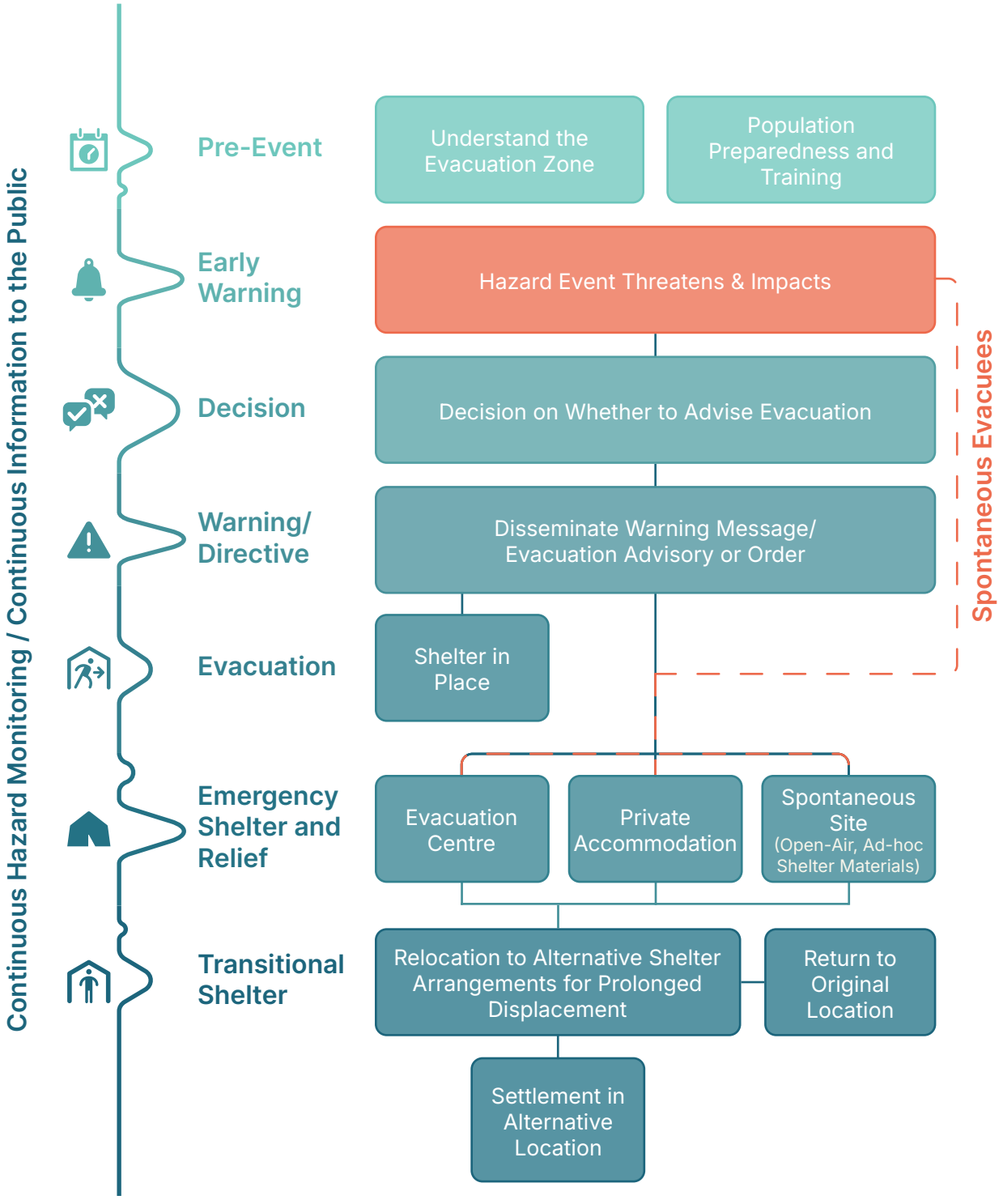
33 Adapted from New Zealand National Civil Defence and Emergency Management, Mass Evacuation Planning Guideline Draft v1.0. Appendix 2, 2008.

1.2. EVACUATION PHASES

This diagram shows a generic evacuation phase sequence for a mass evacuation. All phases should be considered, although elements may be adapted or added according to the context.

('**Shelter-in-place**' option (taking shelter rather than evacuating) and **spontaneous (self-initiated)** evacuees (who initiate their own evacuation but may still rely on evacuation centres) are included).

Figure 2. Evacuation phases from early warning to transitional shelter



Key aspects of these phases include:

Pre-Event (Preparedness)

Community-based and government preparedness measures. Includes: evacuation plan development; ensuring policy, legal, budgetary considerations are addressed; participatory development of community disaster risk assessment and evacuation plans; building capacity of local emergency responders and communities through training and simulation exercises; ensuring early warning systems are in place.

Early Warning

Information provided to the population about approaching or developing hazards (e.g., hurricanes or rising water levels), to prepare them to either shelter-in-place or to decide to self-evacuate or prepare in case evacuation is then ordered or recommended.

Decision

Activation of evacuation procedures: Once a hazard threatens or impacts an area, the official decision to shelter-in-place (to seek shelter and remain in the area) or to evacuate is made. The decision to issue an evacuation order activates evacuation procedures.

Warning/ Directive

Public Evacuation Advisory Notice or Order: warning messages that the decision to evacuate has been made. These should be disseminated to all stakeholders who need to take action to support evacuation, and to all people who need to evacuate.

Evacuation

Movement to safe locations: After receiving the warning, evacuation takes place, where individuals or groups move or are moved from a dangerous area to one of safety.

Emergency Shelter and Assistance

Support to evacuees: On reaching safe locations, evacuees will need access to safe shelter, other basic needs, and safeguards against any further risks to their security and well-being. Temporary shelter and assistance may be provided at official evacuation centres, or accommodation with host families or friends or other private arrangements. Evacuation plans should consider potential need for extended periods of shelter support. The amount of time that evacuees may be displaced depends on the type and extent of the disaster and on their resources to support recovery. Schools and other public buildings used as temporary evacuation centres will need to be recovered to enable children to recommence schooling and basic service provision and administration to be re-established as soon as possible.

Return and Recovery

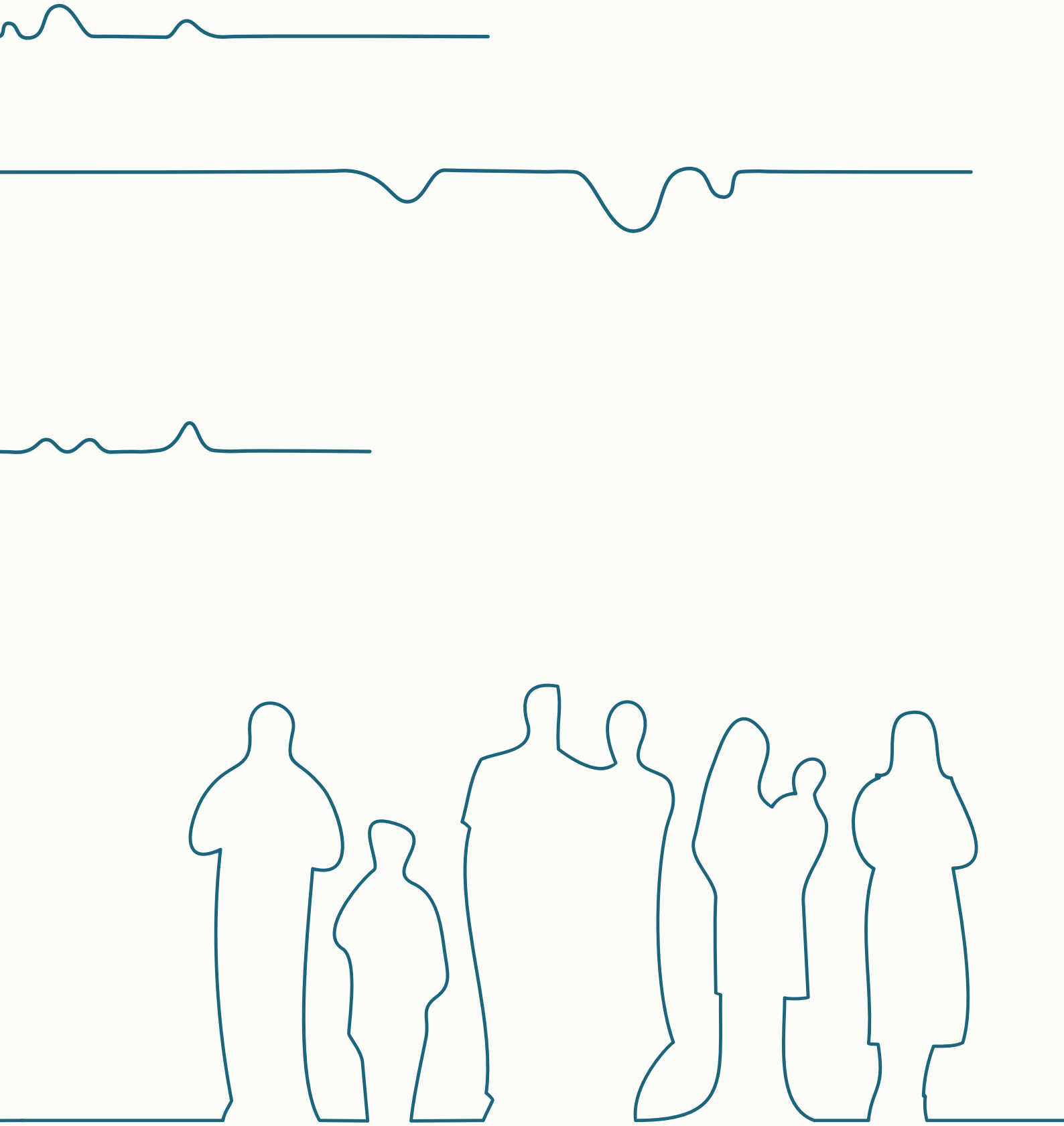
Return and recovery: Once the situation stabilises and if or when evacuation zones become accessible and safe to return to, evacuees should be assisted to return and begin the process of recovery. When return is not immediately possible, transitional shelter and assistance may need to be provided. Where return is not a preferred or viable option, evacuees may require longer-term assistance to enable their integration locally in the area of refuge, or to relocate and settle elsewhere in the country.

Throughout all phases it is vital to ensure:

Continuous risk (hazard) monitoring: of changing needs, movements, and risks to the population as the disaster situation evolves. Includes secondary hazards (e.g., landslides, fire, damaged structures, new heavy rainfall) and secondary technological and environmental impacts (e.g., oil or chemical spills). Also includes monitoring evolving needs and movements of displaced people.

Public information and communication: Information should be provided to the population regularly and throughout at all phases. This includes early warning. It also includes regularly updating evacuees and those who have sheltered-in-place on developments in affected areas, services and assistance, ability or inability to return home, and support for recovery.

KEY PRINCIPLES AND CONSIDERATIONS BEFORE DEVELOPING AN EVACUATION PLAN



2.1. CHECKLIST: ACTIONS AND ANALYSIS TO SUPPORT DEVELOPMENT OF AN EVACUATION PLAN

Before an evacuation plan can be developed, essential information must first be compiled.

This checklist can be used as a reference tool for those leading evacuation planning. It can be used to check what information is already available, and what additional analysis or actions might be necessary, so an evacuation plan can then be developed. **The checklist is non-exhaustive. Depending on the context, some aspects may not apply, or others may be added.**

Over-arching initial assessments and analysis

- Disaster risk assessments and risk mapping have been conducted, detailing the specific risks and the potential level of severity for hazards in each area of concern. These determine the nature and extent of risk by analysing potential hazards and existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.[34]
- Effects of climate change and environmental degradation on frequency and severity of hazards are considered in risk assessments and planning. 4.1. Effects of climate change and environmental degradation on hazards.

Key resources

- National Disaster Risk Assessment Guidelines, UNDRR.[35]
- Enhanced Vulnerability and Capacity Assessment tools, IFRC.[36]

Mass Evacuation in Disasters Simulation Exercise in Navotas, Philippines. © IOM 2018/Charissa Soriano

34 UNDRR. See: https://undrr.org/terminology/disaster-risk-assessment.

35 UNIDSR, Words into Action guidelines: National disaster risk assessment, 2017. Multiple resources at: https://undrr.org/publication/words-action-guidelines-national-disaster-risk-assessment.

36 IFRC, 'Enhanced Vulnerability and Capacity Assessment' guidelines and tools. At: https://preparecenter.org/site/evca/.

Disaster Resilience Scorecard for Cities

The Disaster Resilience Scorecard for Cities is a tool for local governments to assess their disaster resilience, centred around the *Sendai Framework for Disaster Risk Reduction: 2015-2030*. The Disaster Displacement Addendum (the "Scorecard") was developed collaboratively by the Norwegian Refugee Council, UNDRR, IOM, IDMC, and the PDD to empower municipal actors to self-assess the integration of measures to address disaster displacement within wider DRR policies, management, and planning processes at the sub-national government level. It is the latest of the multiple thematic annexes to the Disaster Resilience Scorecard for Cities published by UNDRR and partners in 2017 to support the Making Cities Resilient Initiative (MCR 2030).

The Scorecard provides a set of assessments that allow local governments to assess their disaster resilience, structured around UNDRR's Ten Essentials for Making Cities Resilient. It also helps monitor and review progress and challenges in implementing the Sendai Framework for Disaster Risk Reduction: 2015-2030 and supports baseline analysis for preparation of disaster risk reduction and resilience strategies.

See resources from UNDRR at: https://mcr2030.undrr.org/disaster-resilience-scorecard-cities.

- **An Early Warning System is in place** 4.6. Early Warning Systems.
- **Legal frameworks relating to evacuation are understood.** E.g., legislation on evacuations; provision for enforced evacuation; cross-border agreements; domestic jurisdiction agreements; land use; data protection; custodial care of minors; consideration of international human rights guidelines 4.3. Legal basis of evacuation plans.
- **Community analysis and profiling of potential evacuees is conducted.** Understanding the composition of a community is important for deciding potential courses of action and helps with analysing the potential effects of an evacuation on a community. Areas or communities of special concern or requiring additional consideration might include:
  - Densely settled (urban) communities.
  - Locations with limited access.
  - Areas which have significant environmental degradation, e.g., deforestation, topsoil or coastal erosion, or other forms of ecosystem degradation.
  - Tourist zones and areas occupied or frequented by third-country nationals. 4.10. Inclusion of migrants and 4.11. Tourists and visitors.
  - Earlier displaced communities such as refugees or internally displaced persons or communities recovering from a previous disaster.
  - Livestock keepers, e.g. smallholder farmers 4.12. Livestock and evacuation.
- **Protection considerations are understood and considered throughout planning.** 2.4. Considering Protection and separate 'Checklist for considering GBV and other protection risks in mass evacuation planning for disasters'.
- **Cross-border considerations are identified.** E.g., if people evacuate themselves across a border; cross-border evacuation agreements. 4.4. Cross-border evacuation planning.

- **Links between community, regional, national, global frameworks and response capacities** are identified. Plans should fit into wider legal and operational frameworks, reflecting resources or response capabilities that can be accessed. 4.2. Linking levels.
- **Public information is planned before, during, and after evacuation** 4.8. Public information.
- **Any resource deficiencies are identified (before and during planning).** Evacuation plans must be designed around existing and available resources and infrastructure. During the planning process some resources may be identified as lacking. If so, the planning team should explore arrangements for accessing additional resources from outside the region.
- **Any security concerns or conflict which may affect evacuation are identified.**

Stakeholder and community engagement

- **Stakeholders are identified. Roles, responsibilities, decision-making lines are defined.** An initial stakeholder mapping might be needed to identify who needs to be involved in developing a mass evacuation plan. 2.2. Defining roles and responsibilities and lines of decision-making and 0.4. Responsibility for Planning an Evacuation.
  - Identify stakeholders with formal responsibilities (e.g., government agencies).
  - Identify other stakeholders which might play a role in evacuations, for example in preparedness communication, provision of transport or support to evacuees. E.g. civil society organizations, private sector, media, traditional leaders.
  - Identify the decision-makers and decision-making process at all evacuation phases C.1. Authority & criteria to activate an evacuation plan.
  - Identify capabilities for around-the-clock response during an emergency.
- **Community participation** is sought throughout the process 2.3. Community participation.
- **Trainings and simulation exercises are planned.** Tabletop exercises are a valuable tool to help develop evacuation plans. Simulation exercises can be used to test the plan, and ensure all response actors are aware of what to do. 4.14. Training and simulation exercises.

Key resources

- Example stakeholder mapping tool, NRC's Community Coordination Toolbox

Analysis to inform specific aspects of an evacuation

- **Population size, transport, and route analysis**, is conducted to:
  - Understand population size and ability for self-transport (foot, private vehicle).
  - Identify any modes of transportation to be used and potential routes.
- **Safe transit points and refuge zones are identified.**
- **Evacuation timing models are developed,** to understand the factors influencing how long an evacuation may take, and when to trigger an alert under different types of conditions. 4.7. Evacuation timing models.
- **Inventory of personnel, equipment, and medical services** for treatment of injured people is conducted.
- **Critical public facilities evacuation plans for hospitals, schools, etc.** are in place or planned, under the broader framework See: 4.5. Critical public facilities evacuation plans.

2.2. DEFINING RESPONSIBILITIES AND DECISION-MAKING

Note: Evacuation requires multiple actors to work in coordination, and to understand their own and others' roles to ensure efficient evacuations. Key actors should be involved in the creation of a mass evacuation plan, to ensure that all are familiar with their designated responsibilities.

When developing an evacuation plan, it is essential to:

- **Identify all actors with direct responsibilities.** This might include multiple government and local authority agencies in each evacuation phase (as duty-bearer to protect populations at risk), and other actors, e.g., those responsible for evacuation centre security, health providers, etc.
- **Identify and clarify the roles of other actors,** at national or community level, e.g.:
  - **National and local civil society organizations** may issue early warning and emergency weather alerts via common alert protocols, facilitate evacuations and provide temporary shelter to evacuees. Friends, family, and community and faith-based organizations are usually first options for evacuees seeking temporary refuge.
  - **Media** plays a very important role in all evacuation phases, as a main source of information for the population. It is crucial to:
    - Work with the media before a disaster to ensure they are aware of the response systems and what an evacuation entails, including its triggers.
    - Have agreements for the media to publicize warnings being issued, and for the prepared messages to be given priority over other news or programmes.
  - **Private sector and other potential contributors,** which may provide transportation support, or shelter or assistance to evacuees.
  - In areas with **traditional leadership**, any role tribal or traditional leaders will play.
- **Identify decision-makers at all phases of a mass evacuation and define the decision-making process.** See: C.1. Authority and criteria to activate an evacuation plan.
  - Who is responsible for triggering an evacuation, and what are the indicators that should inform the triggering process?
  - Who is responsible for coordinating the implementation of a mass evacuation, and what form should the coordination structure take?
  - Who declares the end of the evacuation phase? Who assesses return zones?
- **Identify capabilities for around-the-clock response,** e.g., a 24-hour emergency centre. Who is responsible for providing and monitoring continual response capacity?

2.3. COMMUNITY PARTICIPATION

Engagement with communities should be a priority during all phases of evacuation planning.

The success of an evacuation may significantly improve when communities participate in planning. Community representatives can provide valuable local knowledge and context, identify solutions and resources not immediately evident to the authorities or traditional disaster responders, and ensure local capacities and ways of responding are reflected in a plan. Community representatives are often central to disseminating key messages related to an evacuation to the whole community.

Additionally, communities can be supported to identify and organize their own response capacity. People may be less likely to resist evacuation orders when they have had a say in how evacuations should be conducted.

Different groups may have different situations, concerns, capacities, literacy levels, and transport access. The diversity of groups within the community, and any specific support requirements they have, should be reflected in evacuation plans.

Consideration may be needed for (but not limited to):

- People with disabilities, chronic illness, or mental health issues
- Elderly persons
- Women
- Infants, children, and young people
- LGBT+ people
- Indigenous communities, or people from marginalized ethnic groups
- People living on state borders
- Refugees, asylum seekers, internally displaced persons especially if living in displacement sites, communities recovering from an earlier disaster
- Migrants
- Tourists and visitors
- People living in socially or physically isolated, or high-risk, locations, and those in poverty

It is important to first identify the existing different groups within the community, and to then communicate with each to **understand their situation, concerns, and any transport or evacuation issues.** This information should then be used to devise evacuation plans that reflect different needs within the population. Stakeholders who can be engaged with to give input may include community leaders, special interest groups, and local or community organizations that reflect the community's characteristics.

Engaging with different groups to identify their **preferred and trusted ways to receive information** will also help ensure that both public education on evacuations (See: B. Pre-response (preparedness)) and the mechanisms used to disseminate early warnings are effective in reaching people (See: D. Warning).

Community-based planning

Community-based planning is a participatory approach, aiming to promote ownership and community action. It may be supported by local authorities or civil society actors, to help communities prepare for evacuation. This may be under a national or local mass evacuation plan.

Key resources

- Community-Based Planning Manual, IOM.[37]
- Community Coordination Toolbox, NRC.[38] Supporting engagement of community members and especially engagement of women and girls in community coordination.
- Framework for Community Resilience[39] and Enhanced Vulnerability and Capacity Assessment tools, IFRC.[40]
- Navigating Fragility, Conflict and Violence to strengthen community resilience: A handbook for DRR practitioners,[41] Global Disaster Preparedness Center.
- Risk-Informed Development Guide, Global Network of Civil Society Organisations for Disaster Reduction.[42]

Community-based planning exercise in Bougainville, Papua New Guinea. © IOM 2016/Muse Mohammed

37 IOM, Participation in Practice: Community-Based Planning Manual, 2022. In multiple languages at: https://migrantprotection.iom.int/en/resources/manual/participation-practice-community-based-planning-manual-partners.

38 Community Coordination Toolbox, At: https://cct.nrc.no.

39 https://ifrc.org/document/ifrc-framework-community-resilience.

40 IFRC, 'Enhanced Vulnerability and Capacity Assessment' tools. At: https://preparecenter.org/site/evca/.

41 https://preparecenter.org/resource/navigating-fcv-drr-handbook/.

42 Global Network of Civil Society Organisations for Disaster Reduction, Risk-Informed Development Guide. Tools and resources at: https://gndr.org/risk-informed-development-guide/.

2.4 CONSIDERING PROTECTION

While "protection" can relate to potential sources of physical harm such as floods and landslides, it also refers to keeping people safe from all forms of violation of rights, exploitation, and abuse, which are frequent problems during chaos after disasters.

Certain groups may be particularly vulnerable to such violations. They may need special consideration and assistance from authorities during evacuations, in evacuation centres, and to support return.

It is important to first identify what groups may have specific requirements or vulnerabilities in a disaster, and to take their protection needs into consideration when developing evacuation plans.

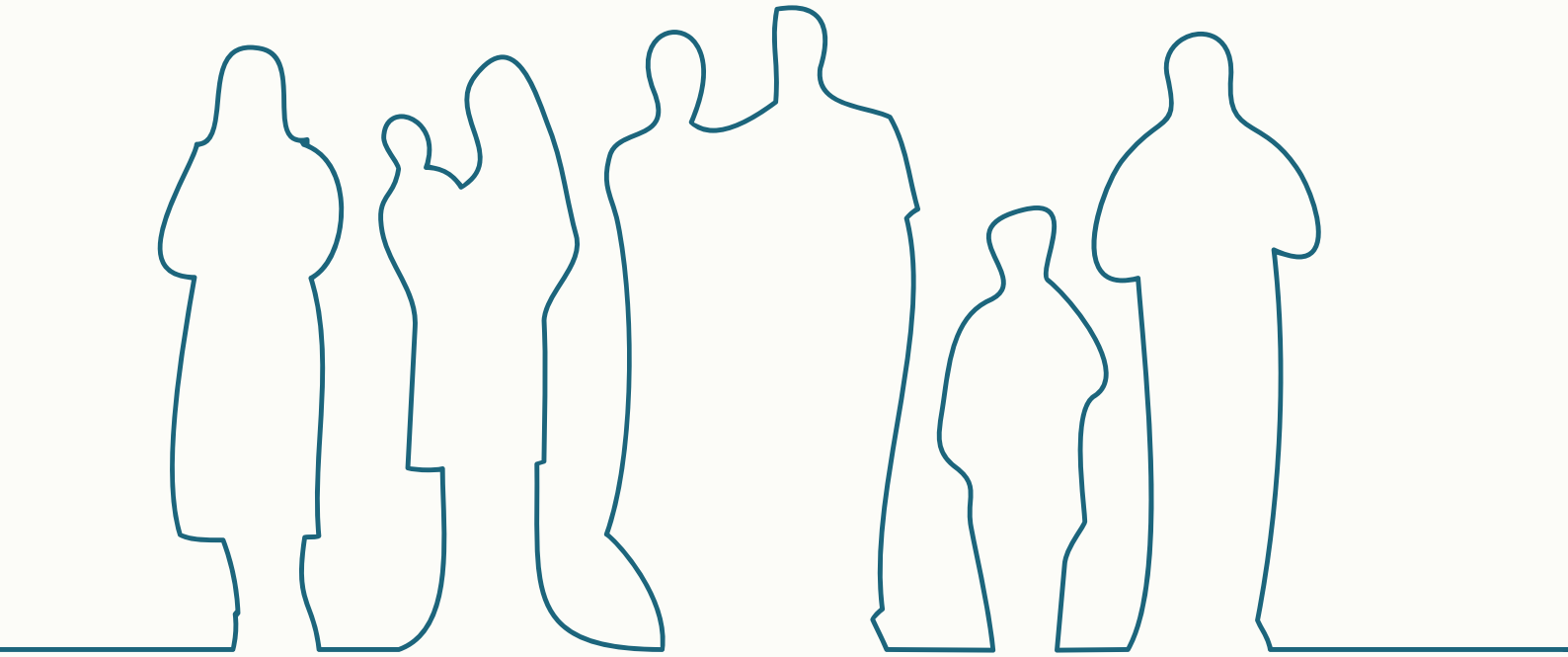
Groups that may require special consideration include: elderly persons, women, infants and children (particularly when unaccompanied), persons with disabilities, chronic illness or mental health issues, minority groups (for example, ethnic or indigenous), those without proper civil documentation.

See: Checklist for considering GBV and other protection risk mitigation in evacuation planning for disasters for more in-depth considerations.

Examples of considerations for specific groups include:

- Women and girls have particular requirements related to reproductive health, primary caregiver roles, and protection from gender-based violence, exploitation and abuse, especially when norms of privacy and dignity are severely disrupted during evacuations and in evacuation centres.
- Children without parents or separated from their primary caregivers may be vulnerable, including to trafficking and sexual exploitation and abuse, during evacuation and in evacuation centres.
- Persons with disabilities and older persons may be at heightened risk when their specific needs are overlooked or not prioritized during evacuations. Especially for those who are housebound or live alone, are frail or unable to move quickly without assistance, are without or separated from networks of family and friends, institutional caregivers and support services. They may be less able to transport themselves and find shelter and critical services they require, including health services. They should be afforded increased protection in terms of their access to assisted evacuation, including steps to prevent family separation and priority access to (adapted) emergency shelter. However, older persons and persons with disabilities can make a positive contribution in coping with emergencies and may be called upon to assume primary caregiving or any other role.
- People who lack access to information about hazards and how to plan for evacuation, or who may not receive evacuation warnings. This could include socially excluded groups, those speaking minority languages, migrants who live and work in risky areas, and people with visual or hearing impairments.
- People who may ordinarily experience discrimination or social exclusion may have difficulty in safely accessing services and may face risks if staying in communal evacuation shelters. For example, people from ethnic minority groups, LBGT+ people, and single women and girls.

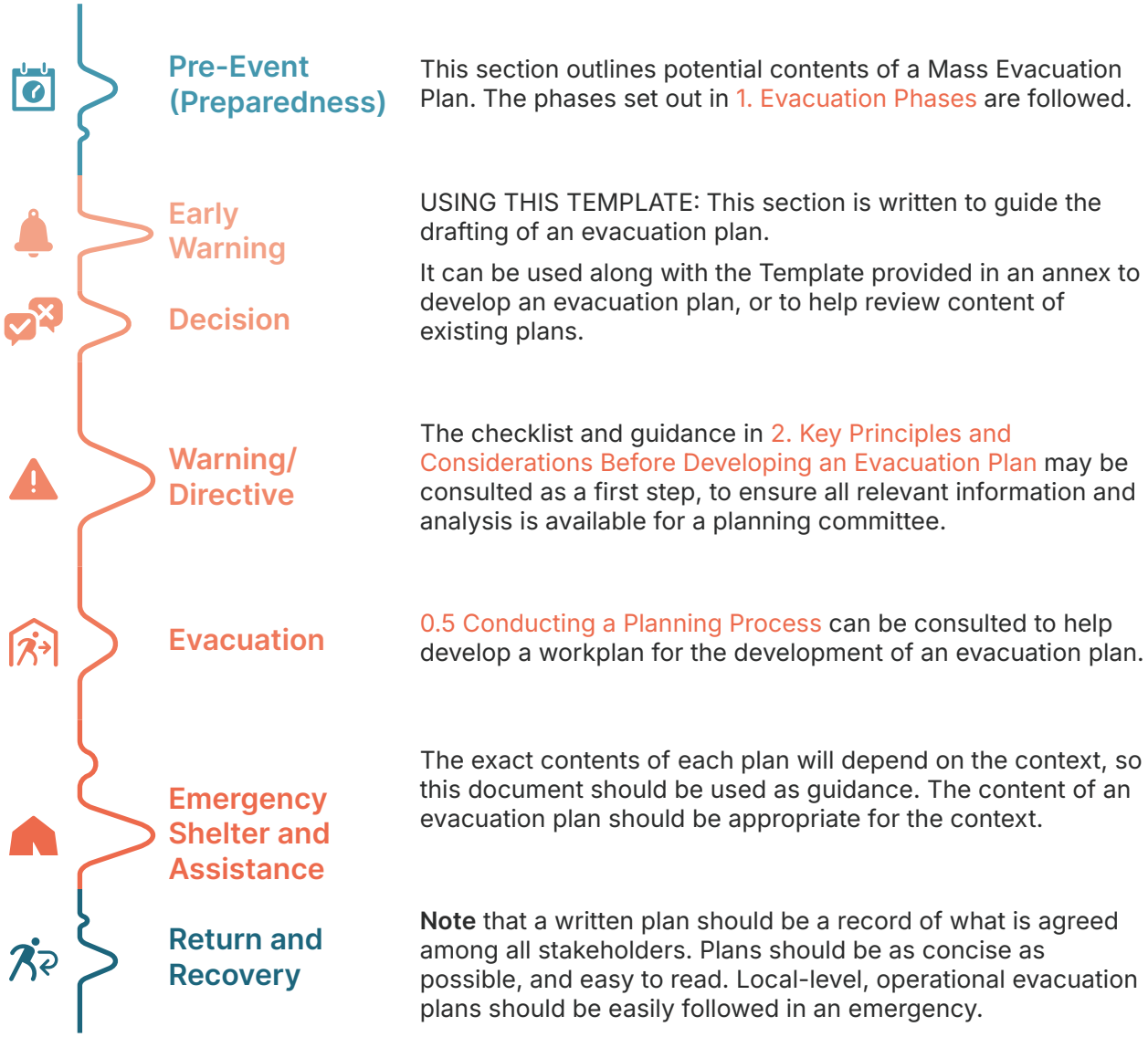
Aerial views of the destruction caused by Hurricane Beryl in Union Island, Saint Vincent and the Grenadines.
© IOM/ 2024 Gema Cortes



CONTENT OF MASS EVACUATION PLAN

A. MASS EVACUATION PLAN

Figure 3. Outline of Mass Evacuation Plan



This section outlines potential contents of a Mass Evacuation Plan. The phases set out in 1. Evacuation Phases are followed.

USING THIS TEMPLATE: This section is written to guide the drafting of an evacuation plan.

It can be used along with the Template provided in an annex to develop an evacuation plan, or to help review content of existing plans.

The checklist and guidance in 2. Key Principles and Considerations Before Developing an Evacuation Plan may be consulted as a first step, to ensure all relevant information and analysis is available for a planning committee.

0.5 Conducting a Planning Process can be consulted to help develop a workplan for the development of an evacuation plan.

The exact contents of each plan will depend on the context, so this document should be used as guidance. The content of an evacuation plan should be appropriate for the context.

Note that a written plan should be a record of what is agreed among all stakeholders. Plans should be as concise as possible, and easy to read. Local-level, operational evacuation plans should be easily followed in an emergency.

Note that while the Early Warning phase is included in the above diagram, it is not included in the template for an evacuation plan. An evacuation plan should link with Early Warning System policies and procedures.

A.1. PURPOSE

Outline the purpose of the mass evacuation plan, which geographic areas and the nature of the hazards it covers, and what it is seeking to achieve.

A.2. SCOPE

Establish the scope and objectives of the plan. This will vary depending on the context, but may include:

- Determines legal or other authority to evacuate;
- Establishes an evacuation management structure;
- Identifies agencies and organizations involved in the evacuation;
- Defines roles and responsibilities of different actors;
- Provides for an effective warning and information system;
- Develops appropriate and flexible plans;
- Establishes the required actions for mass evacuations.

A.3. RELEVANT LEGISLATION

Identify relevant legal provisions in domestic and international law applicable to the evacuation process. E.g., provisions in any national disaster framework as well as other legislation.

A.4. POLICIES

Identify all relevant national and local policies applicable to the evacuation process.

A.5. EVACUATION COORDINATION AND MANAGEMENT STRUCTURE

Establish and outline the structures and mechanisms through which an evacuation will be managed, the activities of all stakeholders, and coordination structure. It can be helpful to develop diagrams showing the flow of information to decision-makers, and lines of communication of the decisions once taken.

A.6. PLANNING AND LAND TENURE INSTRUMENTS

Identify other relevant existing frameworks at other levels or locations, and determine how the mass evacuation plan fits into these. E.g., other emergency protocols relevant to response, or land tenure arrangements relevant to evacuation centre use. This is important to identify what other capacities and resources may be accessed, and how these can be effectively and efficiently coordinated.

A.7. PLANNING ASSUMPTIONS

Identify and outline all the underlying assumptions of the evacuation plan.

Examples of assumptions are:

- Evacuation support is coordinated between national, regional, tribal, or local government.
- Due to secondary risks, evacuation is a last resort. Sheltering-in-place is the most appropriate protective action in many scenarios.
- Residents of the evacuated area will need to return to the area post-event if possible. Plans and methods are necessary to facilitate return of evacuated residents.
- A significant portion of homes will be uninhabitable, preventing some members of the community from returning. Plans for their temporary or long-term relocation will be needed.
- Specific members of the population will require additional support or assistance.

A.8. REVIEW AND REVISION OF THE EVACUATION PLAN

Detail the process for the review and revision of the evacuation plan, at regular intervals.

Setting a specific date and the actor that will be responsible for leading the review can be advisable. Changes may be needed due to:

- Progress in scientific knowledge leading to a redefinition of the hazard zones. An evacuation plan should be revised when a risk assessment for the country or region is revised.
- Changes in the pattern of settlement, road system, communication networks and other technical infrastructure, which will change the procedures for warning and evacuation in emergencies.
- Changes in the administrative structure of the national, regional, or local government.
- After a disaster, it is advisable to review the evacuation plan based on practical experience.

IDPs trudge through thick mud in the Malakal Protection of Civilians site during the rainy season in South Sudan. Caught between conflict, climate change, and recurring disasters, these displaced individuals face a constant struggle for survival in a country grappling with protracted crises. © IOM 2016/Muse Mohammed

B. PRE-RESPONSE (PREPAREDNESS)

Note: Considerations for return and recovery should be considered during the planning of evacuations, to minimize the risk of prolonged displacement of those evacuated.

B.1. HAZARD MONITORING

- **Outline the early warning systems that monitor, analyse, and forecast hazards.**
- **Identify the data thresholds to issue any early warning,** if relevant to the hazard.
- **Identify the data thresholds that will indicate the need to order an evacuation.** It is important to link the data with timing considerations – See: C.2. Timing an Evacuation and C.1. Authority and criteria to activate an evacuation plan.
- Outline any ongoing monitoring systems to track secondary hazards and population movements after an incident or disaster, to be used to inform decision-making and assistance as the situation evolves.

Note: Many people and areas lack access to adequate multi-hazard early warning systems. An evacuation plan should consider local early warning capacities.

The process of hazard monitoring is part of the Early Warning System. For the next steps of decision-making on an evacuation and communication to the public See: 2.2. Defining roles and responsibilities and lines of decision-making, and D.1. Converting Early Warning System data to public warnings.

B.2. INFORMATION EXCHANGE ON HAZARDS

Detail how information on hazards is transferred from information-producing organizations (responsible for hazard monitoring) to evacuation decision-makers (government/communities).

Consider existing coordination mechanisms and how information is shared by data-producing agencies running early warning systems and government decision-makers (or communities themselves).

E.g., how water authorities and national meteorological institutes communicate with Disaster Management Agencies. It can be helpful to develop diagrams showing the flow of information to decision makers.

B.3. PREPARE THE POPULATION FOR AN EVACUATION

Detail plans for ongoing awareness-raising, information dissemination, and public education on risks, early warning, and what to do in an evacuation before the threat or impact of a hazard.

In most cases, communities are first to respond to a disaster. A well-prepared population can help save lives and be very useful during evacuation. Preparing the public helps to reassure people that emergency services will act and may increase the likelihood that instructions will be followed.[43]

Key information to be understood by members of the public to help them prepare may include:

- Understanding of hazards and risks. 4.8 Public Information and 4.6 Early Warning Systems.
- How to prepare themselves and their families for an evacuation, especially to prepare plans for children or family members with specific protection requirements or vulnerabilities.
- How early warning messages will be disseminated, how to understand them, what actions to take. D.1. Converting Early Warning System data to public warnings.
- How an evacuation may be organized, including where to go if choosing to self-evacuate.

Multiple methods of awareness-raising will be needed, to reach as many people as possible. Any one method will reach only some people some of the time. Methods may include: **use of widely accessible technology such as radio or television broadcasts, SMS text messages, community group or school programmes, and social media**. Information should be easily available to any hard-to-reach groups *e.g., foreign nationals, refugees, disadvantaged communities, persons with disabilities*.

Engaging with different groups to identify their **preferred and trusted ways to receive information** will help awareness raising to be effective in reaching people.

There are five key factors to bear in mind, in effectively communicating information:

1. Multiple, trusted sources
2. Repetition
3. Timeliness
4. Clarity of message
5. Translation/language options

Public awareness works best when supported by actions to encourage evacuation. Practice drills support people to evacuate properly and promptly.[44] See: 4.14 Training and simulation exercises.

43 For more on myths surrounding early warning systems and public information see: IFRC, Community early warning systems: guiding principles, 2012 'Abandoning early warning myths' p.17 At: https://ifrc.org/document/community-early-warning-systems-guiding-principles.

44 Ishiwatari, M. and M. Arakida, 'Knowledge note 2-6: Evacuation', 2012. Washington, DC: The World Bank.

B.4. IDENTIFICATION OF SUITABLE SHELTER FOR USE IN EVACUATIONS

Identify accommodation (evacuation centres) in the safety zone.

Evacuation centres provide temporary accommodation for evacuees. They should provide safe shelter and for basic personal needs which arise at an individual level during an emergency.

Note: Initial assessment and mapping may be needed to identify evacuation centres, with an assessment, reporting, and decision-making process agreed. **Standards for evacuation centres** may need to be set, if national standards or relevant building codes do not already exist. Assessment teams should have members with suitable technical expertise to assess locations and structures.[45]

Considerations for identification of appropriate shelter (evacuation centres) include:

- Safety of the location. This may vary depending on hazard type and severity, and secondary hazards, e.g. fire after earthquakes, landslides after heavy rains, damage to chemical plants.
- Buildings should be structurally sound, follow existing building codes, and be suitable for the time of year (e.g. suitable for use in winter, or available in tourist season).
- Availability of facilities and number of persons that can be accommodated.
- Shelter is safe and culturally appropriate for women, and accessible for people with disabilities (*persons with different types of disabilities can reach, enter, circulate and use the facility in safety and with the highest level of independence) according to national building codes and national or international standards for the accessibility of the built environment (e.g. access ramps, handrails, accessible to wheelchair users*).[46]
- Many evacuated persons prefer to remain as close to home as possible.
- It may not be necessary to shelter the entire evacuated population, as some people may make their own arrangements (e.g., staying with family/friends).
- Disruption to work, school, and social arrangements should be minimized when possible.
- Suitable standards should be set (e.g. space per person, number of latrines). These will vary depending on the length of time that people stay in the evacuation centre. *E.g. In Vanuatu, the standard space for evacuation shelters is for 1.5 m2 per person for up to 3 days (72 hours), and 3.5 m2 per person for 4 days and longer.*[47]

45 Republic of Vanuatu, National Guidelines for the Selection and Assessment of Evacuation Centres, 2016. At: https://ndmo.gov.vu/resources/downloads/1-about-ndmo/17-evacuation-centre-guidelines.

46 See: IFRC, Disability-inclusive shelter and settlements in emergencies, 2015; International Organization for Standardization, 'ISO 21542:2021 – Building construction – Accessibility and usability of the built environment', 2021, Second Edition.

47 Republic of Vanuatu, Evacuation Centre Minimum Requirements – Checklist, NDMO, 2016.

Key resources

- Evacuation Centres Guidelines and Evacuation Centre Checklist, Vanuatu[48] – comprehensive guidance for assessing and classifying evacuation centres.
- Evacuation Shelter Management Guidelines, Bangladesh[49] – guidance and standards for selecting new sites or using pre-existing structures.
- Annex to this guide on Evacuation Shelter [draft, available on request].[50]
- Sphere Standards for global guidance and minimum standards for shelter and services for longer-term displacement.[51]
- Disability-inclusive shelter and settlements in emergencies, IFRC.[52]
- Standards for Accessibility and Usability of the Built Environment, ISO.[53]
- See also resources on evacuation centres in F. Emergency Shelter and Assistance.

Considerations for use of public facilities and schools as evacuation centres

Public buildings, particularly schools, are often used as evacuation centres, as they have existing water and sanitation facilities, separated rooms, and are visible and familiar to local communities. In some areas, public buildings are constructed to a standard to be used as community evacuation centres in a cyclone or tornado.

However, issues in their use must be considered during planning. This includes: safety of the building; use for only temporary not long-term accommodation (so education or services can resume); plans for cleaning and any damage repair after use.

Key resources

- Limiting and planning for schools as temporary evacuation centres,[54] Save the Children, for guidance and a checklist that can support planning.
- Collective Centre Guidelines,[55] Global CCCM Cluster, for analysing potential impacts on host communities of the use of public facilities as accommodation.

48 Republic of Vanuatu, National Guidelines for the Selection and Assessment of Evacuation Centres, Ministry of Climate Change Adaptation, 2016 and Evacuation Centre Minimum Requirements – Checklist, NDMO, 2016. At: https://ndmo.gov.vu/resources/downloads/1-about-ndmo/17-evacuation-centre-guidelines.

49 Government of Bangladesh, Evacuation Shelter Management Guidelines, 2023.

50 Contact: support@cccmcluster.org.

51 Sphere Association, The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, 2018. In multiple languages at: https://spherestandards.org/handbook/editions/.

52 IFRC, Disability-inclusive shelter and settlements in emergencies, 2015. https://ifrc.org/media/48958.

53 International Organization for Standardization, 'ISO 21542:2021 – Building construction – Accessibility and usability of the built environment', 2021. At: https://iso.org/standard/71860.html.

54 Save the Children, Limiting and planning for schools as temporary evacuation centres – Policy brief and practice guidance for Pacific Nations, Asia Pacific Coalition for School Safety, 2017.

55 Global CCCM Cluster, Collective Centre Guidelines, 2010. In multiple languages.

Shelter of animals: Livestock and pets

If animals (livestock or pets) are likely to be transported out of the evacuation zone, options for accommodating animals will also need to be considered in plans for the provision of shelter. 4.12 Livestock and evacuation.

Protection recommendations relevant to pre-identification of shelter

- Identify and use smaller evacuation centres where possible, as self-regulation for protection is more likely within smaller groups, and solidarity may be fostered;
- Incorporate consultation with: representatives from at-risk groups to ensure evacuation centres are safe and appropriate for use; host communities to assess their attitude towards evacuated populations, and support they may need for hosting them;
- Assessment tools for identifying evacuation centres should include protection and inclusion considerations, to ensure that minimum physical safety requirements are met. *E.g., dangers and risks of injuries that may affect children*.
- Ensure the centre is culturally appropriate and safe for women, and other at-risk groups. *E.g. separate areas for women and families and for men; accessible, sex-separated toilets; provision for menstrual hygiene management.*
- Ensure, as possible, that evacuation centres are accessible for people with different types of disabilities. Refer and use national building codes and national and international standards for accessibility of the built environment.
- Set appropriate standards to avoid over-crowding (which can increase stress and risk of violence including against women) and for living conditions suitable for length of use.
- Special shelter arrangements may be necessary if basic shelter does not meet the needs of individuals with specific requirements. *E.g. older people, pregnant women, children with autism (and caregivers) may be more safely accommodated in hotels; people who usually receive in-home medical care may need specialised shelters; care arrangements may be needed for unaccompanied children.*

Increasing water scarcity in Udayapur, Nepal is forcing farmers to abandon their fields as vital water sources dry up. Deforestation and prolonged drought leave communities struggling to survive, highlighting the harsh realities of climate change. © IOM 2016/Amanda Nero

INDIA | Hazard monitoring and communication to the public[56]

India's response to cyclone Phailin in 2013 demonstrates preparation and hazard monitoring saving lives. Despite being similar in size, speed, and force to cyclone Paradip in 1999, Phailin resulted in far fewer deaths. Nearly 10,000 people were killed by Paradip, but less than 50 by Phailin.

When meteorologists reported that the cyclone was heading towards the east coast, communities and authorities took immediate action. Emergency response teams and supplies were moved into position, fishermen brought their boats to shore, farmers harvested crops, and the armed services and government bodies were put on standby. Approximately one million people were evacuated from the coast to safe areas.

The evacuation success was credited to vast improvements in physical infrastructure and communication systems. These ensured that nearly everybody was aware of the approaching danger and could act. Long-term collaborative efforts by the government, aid agencies, and communities to increase preparedness showed positive results. Preparedness activities in high-risk areas such as disaster simulations, hazard mapping and improving community resilience, combined with improvements in technology – such as mobile phones and weather tracking systems – ensured that the government and communities were ready.

CUBA | Population preparation[57]

Due to its location in the Caribbean, Cuba is prone to hurricanes and is credited with having strong early warning systems and preparedness protocols. In 2022, Hurricane Ian, a Category 4 storm, hit the Cuban coast. Evacuations were coordinated by the government with support of the Cuban Red Cross, starting three days before landfall – warned by the Early Warning system. Over 76,000 people were evacuated to government-run centres and others to homes of friends of family. While thousands of buildings were damaged, only three people were killed. Similarly, in 2004, Cuba during Hurricane Charley, about 250,000 people were evacuated and four people died, and in Hurricane Ivan, over 2 million people were evacuated and no lives lost. Cuba's success is credited to governance and focus on community mobilization on preparedness. Cuba has a high-level meteorological institute, issuing warnings well in time.

Cuba has well-established procedures in place to prepare the population for mass evacuations in disasters. These include community risk mapping, an annual updating of emergency plans, and a national simulation exercise. These contribute to training, trust-building and community commitment. Simulation exercises enable local governments to determine priorities and adjust goals. Participation and local leadership are built into the emergency response system. Disaster preparedness, prevention and response are also part of all school curriculums, designed for children to spread awareness to family and neighbours.

56 Poulter, A. and McDiarmid, T., 'Being prepared: India's response to Cyclone Phailin', Development Policy Centre Blog, 2013. At: https://devpolicy.org/being-prepared-indias-response-to-cyclone-phailin-20131024/ & Harris, Gardiner with Vyawahare, M., Kumar, H., V. Nemana, 'Quick Evacuation Efforts Help India Minimize Deaths from Cyclone', New York Times, 13 October 2013. At: https://nytimes.com/2013/10/14/world/asia/india-cyclone.html?_r=0.

57 Thompson, M. with I. Gaviria, Weathering the Storm: Lessons in Risk Reduction from Cuba, 2004, Boston: Oxfam America, t: https://oxfamamerica.org/explore/research-publications/cuba-weathering-the-storm/; Cuban Civil Defense, example for MEND guide, 2013; IFRC, 'Cuba: Hurricane Ian - Operation Update No. 1, Emergency appeal No. MDRCU008', 19 November 2022.

C. DECISION TO EVACUATE

Note: Early Warning may be given if the hazard threat is known before it impacts. See: 1.2. Evacuation phases. This guidance is for planning evacuation, complementing Early Warning System procedures.

C.1. AUTHORITY AND CRITERIA TO ACTIVATE AN EVACUATION PLAN

Outline the process for decision-making and identify activation criteria to determine when an evacuation would, or would not, be an appropriate response.

There should be two parts to this section:

A) 'Authority to Evacuate' – establishing the person or governmental body that has the authority to issue an evacuation order, and the executive process for the decision to be made.

B) 'Criteria for the Activation of the Plan' – requiring analysis of hazard and risk assessments.

The decision-making process should be:

- Incorporated into legislation and policies
- Supported by organizations' internal processes and protocols
- Reviewed and updated routinely
- Known to those who make the actual evacuation decision
- Transparent to all partnering organizations

Note: Decisions to evacuate may require officials to balance potentially costly, hazardous, or unnecessary evacuations against the possibility of loss of life due to a delayed order to evacuate.[58] Decision-making is assisted by the availability of timely and relevant information. Mass evacuation entails major disruption of normal life for large numbers of people and is only undertaken when the risks of staying in a threatened area are judged to be unacceptable.[59]

Factors that may be taken into consideration when deciding to order an evacuation, include:

- Vulnerability analysis
- Time available for evacuation
- Number of evacuees
- Evacuation routes
- Safety
- Resources available
- Environmental factors
- Night or daytime evacuations

58 Lindsay, B. R., 'Federal Evacuation Policy: Issues for Congress', Congressional Research Service, 2011.
59 UNDRO and UNESCO, Volcanic Emergency Management, 1985. New York: United Nations.

C.2. TIMING AN EVACUATION

This part of the evacuation plan should include an evacuation timing model

An evacuation timing model is extremely useful in assessing time limitations affecting evacuation.

- Time is a crucial resource in deciding when to trigger an alert and carry out an evacuation.
- Issues of timing should be identified when conducting assessments of evacuation zones.
- Scientific data and analysis is vital to inform decisions on how to time an evacuation.

See 4.7. Evacuation timing models. Some conditions may extend the time needed to evacuate (e.g., when emergencies occur at night), so an evacuation may need to be triggered earlier. Phased warning messages may be considered. See also B.1. Hazard Monitoring.

South Sudanese refugees cross the Pagak border into Ethiopia, carrying their belongings in search of safety from conflict. Regular mass mixed migration flows often overwhelm aid resources and highlight the need for continuing humanitarian assistance to displaced South Sudanese populations.© IOM 2017/Rikka Tupaz

D. WARNING

D.1. CONVERTING EARLY WARNING SYSTEM DATA TO PUBLIC WARNINGS

This section of an evacuation plan should:

- **Define the data or triggers to issue a public warning** See: B.1. Hazard Monitoring.
- **Identify the decision-maker** who will trigger a public warning.
- **Identify the responsible actor(s) for dissemination, and procedures for release.**
- **Define the methods to disseminate warnings** to ensure as wide a reach as possible.
- **Identify a technical actor responsible (around-the-clock) for translating data into messages that can be understood by the public.** Key messages may be designed in advance for some hazards. Include provisions for an operational, around-the-clock centre to translate and transmit scientific information to the public as new developments emerge.
- **Define coordination mechanisms with media and community outlets,** to disseminate official warnings and ensure media coverage avoids rumours and speculation.

Communication

Once a decision to evacuate is taken, the population should be informed via official channels of:

- Relevant details of the situation.
- Whether or not they are expected to be affected, and to what extent.
- What action they should take, including instructions on actions to evacuate from a hazard zone.

Note: To be effective, early warning systems must be understandable, trusted, and relevant Miscommunication or lack of trust in the source of the warning may lead to under-response (when people ignore evacuation orders and remain in the hazard zone) or self-evacuation when evacuation is not needed. These can cause significant problems for authorities responding to a disaster.

Hard-to-reach groups

Hard-to-reach groups, e.g., people without a fixed residence, minorities, or isolated population groups, can be particularly vulnerable in an evacuation. It is important that these groups are identified, and that appropriate warning methods are planned in consultation with community members. See: 2.3. Community Engagement.

Methods of warning

Clear, credible, timely, and accurate information that is easily understood by the population is crucial to ensuring an efficient evacuation. Key messages should be prepared by authorities, based on threat level (e.g. alert of severe weather or notification to evacuate), type of hazard, and timing.

Note: Different methods of warning will suit different geographic regions and community groups. Multiple methods and languages may be needed, to ensure as wide a reach as possible. It should be ensured,as much as possible within the time available, that warning messages can be received and understood by all population groups, including persons with special communication needs.[60]

Methods for disseminating official warnings include:

- Media releases (clarify role of media in disseminating information in advance)
- Radio and television announcements
- Website/social media
- Email
- Telephone
- Text (SMS) messages
- CB radio
- Sirens
- Warning flags
- Public address systems (static and vehicle mounted)
- Door knocking
- Community networks

Public warning messages should be clear and concise. They should be disseminated in at least two formats (written and audible), that will be trusted by people receiving them. Messages should be suitable for all types of receivers, be understood by all ages and education, and be in multiple languages if needed.[61]

IOM disaster preparedness awareness-raising sessions held at schools located near the Tavurvur and Vulcan volcanoes in Kokopo, Papua New Guinea. © IOM 2016/Muse Mohammed

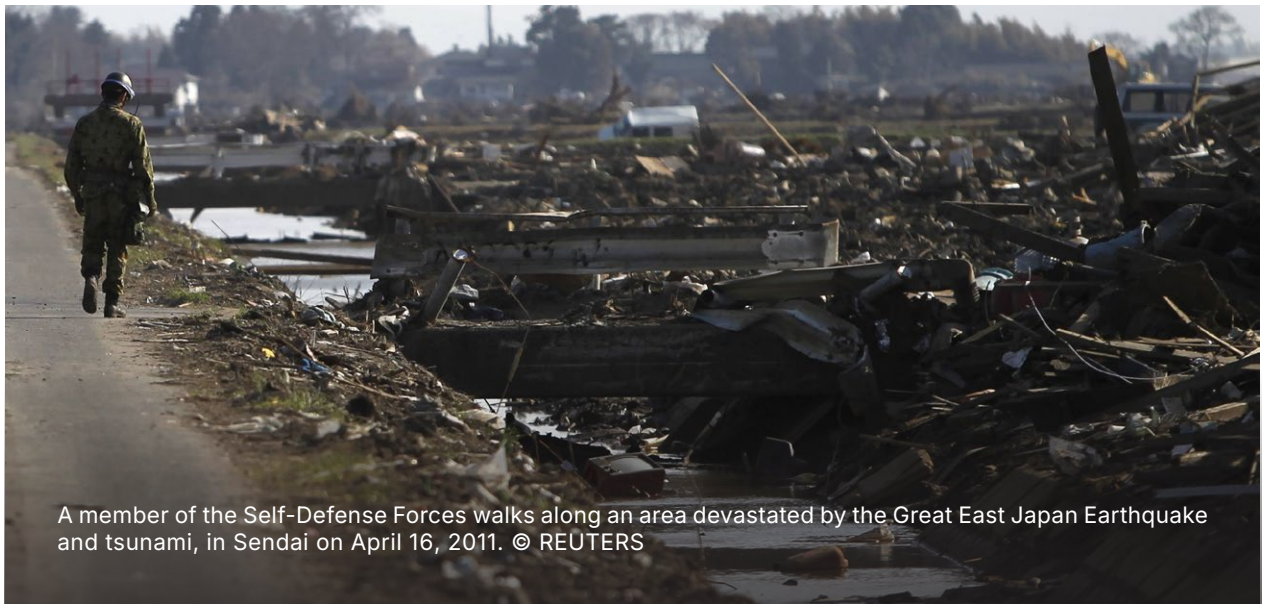
60 Republic of Ireland, A Framework for Major Emergency Management. Working Draft, Guidance Document 6: A Guide Managing Evacuation, 2006. Dublin: Department of Environment, Heritage and Local Government.

61 Mitchell, J. T., Cutter, S. L. & Edmonds, A. S., 'Improving Shadow Evacuation Management: Case Study of the Graniteville, South Carolina Chlorine Spill', Journal of Emergency Management, 2006. Vol. 5 (1), p. 28-34.

JAPAN | Warning and disaster impact on persons with disabilities[62]

After the 2011 earthquake and tsunami in Japan, over 15,500 people died and nearly 500,000 were made homeless. The mortality rate of persons with disabilities was twice that of the rest of the population. It has been estimated that 25% of those who died from indirect effects – illness or stress related to the disaster – were persons with disabilities. Reasons given for these higher death rates have included: People with physical disabilities being unable to escape from their homes or vehicles, or access evacuation centres. Some people with developmental disabilities panicking and being unable to follow evacuation instructions. People with hearing impairments not being able to hear the sirens and announcements alerting the general population to flee (while the national broadcaster provided closed captions in its television alerts, electrical power outages meant many people did not have power, unable to access these alerts).

The government revised its disaster laws in 2013 and in 2021, including a focus on improving evacuation options for elderly people and persons with disabilities (although implementation of this has been gradual). Municipalities now should make lists of people who would need assistance to evacuate and create a plan for each person (if consent is given) on where and how to evacuate, and who would help them evacuate.



A member of the Self-Defense Forces walks along an area devastated by the Great East Japan Earthquake and tsunami, in Sendai on April 16, 2011. © REUTERS

62 Cabinet Office, Government of Japan, 'Column 4: Mortality rate of people with disabilities in the Great East Japan Earthquake', Annual Report on Government Measures for Persons with Disabilities, 2012. Retrieved from https://8.cao.go.jp/shougai/english/annualreport/2012/index-pdf.html; 'Disabled account for 25% of Japan's 2011 quake-linked deaths: survey', Kyodo News, 02 March 2020. https://english.kyodonews.net/news/2020/03/38f75404276d-disabled-account-for-25-of-japans-2011-quake-linked-deaths-survey.html; 'Great East Japan Earthquake and Tsunami and the Disabled', Accessible Japan. https://accessible-japan.com/great-east-japan-earthquake-tsunami-disabled/; 'More than decade after 2011 quake, Japan still slow to compile evacuation plans', Japan Times, 01 March 2024 https://japantimes.co.jp/news/2024/03/01/japan/society/evacuation-plans-for-people-in-need/.

NEPAL | Community-based Early Warning Systems for flooding[63]

Community-based early warning systems (CBEWS) mean communities are active participants in system design, monitoring, and management – not just receiving warnings. In Nepal, CBEWS have been implemented in flood-prone areas, evolving from watchtower techniques to integration with national government early warning. The Department of Hydrology and Meteorology (DHM), local government, and international and local NGOs have collaborated to establish CBEWS. Early CBEWS were set up by working with communities to map historical flooding, to understand the relationship between river height upstream and downstream flooding. Upstream gauges (monitored by government staff who are community members) are used to trigger warning to downstream communities, often by SMS to identified people for dissemination.

By 2013, the DHM had installed Early Warning Systems in 24 locations, including telemetric stations for data acquisition and transfer, and over 200 hydrological and 400 meteorological stations (most manual, some automatic). If a river rises to a critical level, simultaneous sirens are activated in the community, District Administration Office, and National Emergency Operation Centre. Community-level disaster management committees are equipped and trained for warning dissemination, preparedness, and immediate response.

These mechanisms have been very effective, but usually give only a two- to three-hour warning. Work in 2024 is ongoing to extend lead times, to give communities, especially people with restricted mobility, more time to evacuate, and to be able to protect livelihoods, livestock, and assets. This includes linking water level monitoring with hydrological forecasts to disseminate early warning. The DHM issues three-day forecasts of rains, disseminating early warning messages by radio, television, social media, mobile phone, and hotlines.

63 Ministry of Home Affairs, Nepal, example for the MEND Guide, 2013; Smith, P., Brown, S., Dugar, S., 'Community-based early warning systems for flood risk mitigation in Nepal', Natural Hazards and Earth System Sciences, 17, 423–437, 2017 At: https://nhess.copernicus.org/articles/17/423/2017/; Bhandari, Dinanath, 'Community-centre flood early warning system in Nepal, PreventionWeb, 15 June 2021 At: https://preventionweb.net/news/community-centred-flood-early-warning-system-nepal.

Global | Early Warning Systems and Early Action in Fragile, Conflict-affected and Violent Contexts (2024)[64]

The United Nations Office for Disaster Risk Reduction (UNDRR) and the World Meteorological Organization (WMO) published this handbook to guide the development and implementation of people-centered early warning systems (EWS) in fragile, conflict-affected, and violent (FCV) contexts. Recognizing that traditional EWS may not be suitable for these complex settings, the handbook emphasizes the importance of adapting to the unique challenges and needs of FCV environments. It highlights the need for conflict-sensitive approaches, community engagement, and multi-stakeholder coordination to ensure that EWS are effective and do not inadvertently exacerbate existing tensions or vulnerabilities.

The handbook draws on case studies from different FCV contexts, such as Afghanistan.[65] A project funded by the Climate Risk and Early Warning Systems (CREWS) initiative, aimed to improve access to hydrometeorological, climate, and early warning services in Afghanistan. The project focused on strengthening the development and delivery of early warning and hydrometeorological services, increasing the generation of open-access data and knowledge products, and deepening the comprehension of climate change impacts on key socioeconomic sectors. In its initial 3 years, the project made significant progress in enhancing institutional capacities and piloting community-based disaster risk management activities. However, the Taliban takeover in August 2021 presented unforeseen challenges, as many staff members left the agencies involved, and re-establishing connections became difficult. Despite these hurdles, the program team managed to maintain communication and continue its activities, highlighting the importance of adaptability and resilience in FCV contexts. The project also emphasized the value of community-based approaches, utilizing innovative tools like low-cost weather stations and a weatherboard mobile app to empower local communities to prepare for and respond to natural hazards. Even in FCV contexts like Afghanistan, investing in data collection, institutional capacity building, and community engagement can significantly improve disaster preparedness and response, including mass evacuations.

64 https://undrr.org/publication/early-warning-systems-and-early-action-fragile-conflict-affected-and-violent-contexts.

65 https://crews-initiative.org/wp-content/uploads/2024/06/CREWS_Project_Progress_Report_Afghanistan_-_Jan_June_2022_.pdf.

E. EVACUATION

E.1. SECURITY IN EVACUATED ZONES

Detail plans for maintaining security and preventing unauthorized access to evacuated areas.

Unless the danger to life is immediate and obvious, people may be reluctant to leave their homes without assurances that their property will be guarded against theft and looting during their absence. Adequate precautions should be taken to prevent the access of unauthorized persons to evacuated zones, and regular police patrols maintained if this does not endanger the lives of the police.

E.2. TRANSPORTATION AND TRAFFIC CONTROL

Detail plans (using assessment findings) on how evacuees will move or be transported as quickly as possible to a place of safety following the threat or impact of a hazard.

Transportation

The types of transport used to evacuate people out of the hazard zone will depend on the context and hazard. Transport for self-evacuation might need to be managed by the authorities. Transport may be provided for people who do not have the ability or resources to transport themselves.

Persons with transportation needs may include:

- People who do not own a vehicle (e.g., those with low income, or visitors).
- People with physical or medical conditions affecting mobility (e.g., visual impairment, medical device dependent or using mobility assistive devices).
- People who can move by foot/vehicle but do not self-evacuate (e.g., due to fear).
- Individuals who are not able to self-evacuate (e.g., due to type of hazard).

It is essential to identify and coordinate available transportation resources. *E.g., use of buses, taxis and volunteer drivers, aircraft, helicopters, boats, traditional methods (e.g., donkeys and carts).*

Actors providing transportation (e.g., military, private sector) should be included in planning.

Simple registration of evacuees might be conducted in some cases where mass transportation is provided (e.g., to evacuate coastal areas by sea). This should ideally be through a simple tool, developed in advance. See F.4. Data collection and information management.

In some cases, it may be better if people do not use their own vehicle due to the potential for traffic congestion. However, deterring use of personal vehicles may be difficult, as it is often the method preferred by evacuees and would require significant resources to restrict.

Evacuation route identification

Evacuation routes should be identified in advance, and well-communicated to the population. Evacuation routes for some hazards e.g. tsunamis may be marked with signs. As routes may become blocked in an emergency, it is also important to plan alternate routes or ways of evacuation.

Factors that should be considered when selecting an evacuation route include:

- Shortest route to the designated destination areas
- Capacity of proposed routes to accommodate the mode of transportation to be used
- Maximum road capacity
- Ability to increase capacity and traffic flow using traffic control strategies
- Availability of infrastructure to disseminate real-time conditions and messages to evacuees
- Number of potentially hazardous points, such as bridges and tunnels
- Damage assessment of evacuation routes

Traffic control measures

In any evacuation, plans should be made to keep traffic moving on key routes. Traffic movement will be particularly difficult in very built-up urban areas, and in rural areas with poor roads.

Examples of traffic control measures that can be used during evacuations include: *segregation of pedestrian and vehicle traffic; exclusive bus routes; phased evacuation; use of designated markings; road barriers; use of traffic management techniques such as "contra-flow" (making in-bound and out-bound lanes uni-directional)*. Provisions such as fuel, water, and toilets can be made available along the route.

Transportation of animals (pets, livestock)

Evacuees will often seek to bring their animals with them. People may ignore evacuation orders if forced to leave pets or livestock behind, especially if livestock are relied on for livelihood or subsistence. Planning may be needed for transport of animals. See: 4.12. Livestock and evacuation.

Community affected by severe flooding and mudslides in Peru. © IOM 2017

F. EMERGENCY SHELTER AND ASSISTANCE

F.1. MANAGEMENT OF EVACUATION CENTRES

Determine the management structure for the evacuation centres and their services.

A management structure should coordinate agencies and services, support emergency workers to fulfill their role, and provide appropriate information to the evacuated population. Management could be done by, e.g., *volunteer committees, staff from a public building being used as an evacuation centre, an NGO or Red Cross Red Crescent national society, or by local authority staff.*

The structure of evacuation centre management might change depending on the length of time people are anticipated to be evacuated. If evacuation lasts for a longer period, management responsibilities may shift, e.g., from initial volunteers to a more formal structure.

Key resources

- Training on site management for evacuation centres, from the Global CCCM Cluster.[66]
- The Collective Centre Guidelines[67] and Minimum Standards for Camp Management[68] can be used to support quality management if evacuation centres stay open longer-term.

Displaced population after Hurricane Dorian, The Bahamas (2019). © Associated Press (AP)/Al Diaz

66 Contact: support@cccmcluster.org.

67 Global CCCM Cluster, Collective Centre Guidelines, 2010. In multiple languages at: https://cccmcluster.org/resources/collective-centre-guidelines.

68 Minimum Standards for Camp Management, 2021. In multiple languages at: https://cccmcluster.org/resources/minimum-standards-camp-management.

F.2. ASSISTANCE AND SERVICES

Determine the plan for provision of assistance and services.

Planning for assistance and service provision

Necessary assistance will depend on how long the evacuation centre will stay open for. Types and standards of facilities, assistance, and services will change from the first 72 hours of an evacuation, to potentially several weeks depending on the impact of the disaster.

Note: Other evacuated people, or host communities whose services have been disrupted, may visit evacuation centres to access assistance (e.g. food, water, registration, information) even if they are sleeping elsewhere.[69] These potential users should be included in planning.

The following can be considered in planning:

- Potential length of displacement depending on the type and scale of hazard
- Types of services necessary for immediate needs, mid-term needs, and return and recovery
- Primary service providers for each type of service, and secondary service providers in case the primary providers are unavailable or reduced because of the disaster
- Where primary service items will be stored and plans for accessing these. Where secondary items will be stored and plans for access, in case primary items are lost or damaged.

Facilities and assistance must meet basic human needs, and should provide for:[70]

- Drinking water
- Food
- Sanitation (accessible and sex-separated toilets, handwashing facilities, provision for menstrual hygiene management)
- Electrical power and communications (as possible)
- Medical support (first aid)
- Non-food items such as clothing, blankets, bedding
- Information and referral services
- Security
- Gender separation, if culturally appropriate and feasible See: F.6. Protection considerations

Other considerations for evacuation centre setup and management include:

- Car parking – if people will arrive at the evacuation centre by private vehicle.
- Storage – if people have been able to evacuate in advance and bring belongings with them.
- Pets – if people are likely to evacuate their pets with them.
- Livestock accommodation – if part of evacuation planning.

69 Australian Red Cross, Evacuation Centre Management Handbook, Version 4.0, 2023. At: https://redcross.org.au/sheltering/.

70 Sphere Association, The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, 2018. In multiple languages at: https://spherestandards.org/handbook/editions/.

Welfare and support services

Providing welfare and support services in an evacuation centre can help recovery. Types of services required will differ between short-term evacuation or extended displacement. It is important to identify anticipated services and offer guidance for their provision. Such services may include:

- Assistance with family tracing
- Financial assistance
- Counselling
- Interpretation services
- Legal services

Special shelter arrangements

As noted in B.4. Identification of suitable shelter for use in evacuations, some individuals may require special shelter arrangements and services if basic shelter does not meet their specific requirements. *E.g. for individuals requiring continual or comprehensive medical support, nursing home residents, children with autism, unaccompanied children.*

Setting service standards

Service standards for evacuation centres should be set as part of evacuation planning. Appropriate service standards will depend on length of time that people will stay in the evacuation centre.

Key resources

- Sphere Standards – global guidance and minimum services standards for displaced people.
- Evacuation Centre Management Field Guide, and Management Handbook, and Preferred Sheltering Practices for Emergency Sheltering in Australia, Australian Red Cross.[71]
- Evacuation Centre Planning Toolkit, Queensland Australian Red Cross.[72]
- Guidelines on Evacuation Center Coordination and Management, Philippines.[73]
- Local Government Unit Disaster Preparedness Manual p.59-60, Philippines.[74]
- Evacuation Shelter Management Guidelines, Bangladesh.[75]

71 Australian Red Cross, Evacuation Shelter Management Field Guide (2023), Evacuation Centre Management Handbook (2023), and Preferred Sheltering Practices for Emergency Sheltering in Australia (2014). At: https://redcross.org.au/sheltering/.

72 Australian Red Cross, Queensland Evacuation Centre Planning Toolkit, 2017.

73 Government of the Philippines, 'Guidelines on Evacuation Centre Coordination and Management', Joint Memorandum Circular Series of 2013.

74 Government of the Philippines, Local Government Unit Disaster Preparedness Manual for City and Municipal LGUs, 2018. At: https://lga.gov.ph/uploads/publication/attachments/1590478478.pdf.

75 Government of Bangladesh, Evacuation Shelter Management Guidelines, 2023.

F.3. PUBLIC INFORMATION AFTER EVACUATION

Determine how information will be shared with evacuated people (in an evacuation centre or elsewhere) about the disaster situation, assistance, and safe return to their homes.

It is important to establish public information messages and mechanisms to share relevant information with affected people including: weather updates, status of the emergency, conditions in locations of origin, property damage in the affected areas, and other points of concern.

While media outlets typically provide information during an emergency, they will not have the same level of access as authorities and responders, and may engage in speculation. Official information should be provided by responders and authorities, to avoid misleading information being shared.

In the absence of accurate, clear and frequently shared information, rumours, misinformation, and speculation can spread quickly. This may lead to uneasiness in evacuation centres or misinformed decisions by evacuees. Evacuation centre managers or humanitarian actors working in evacuation centres may engage in tracking and countering rumours, as well as sharing accurate information.

Key resources

- Guidance on rumour tracking from the CDAC Network.[76]
- The Community Coordination Toolbox contains useful resources for longer-term use.[77]

Awareness raising about hygiene and sanitation practices to community members in Kabasa, one of the large informal displacement sites for IDP in Dolow, Somalia. © IOM 2022/Claudia Rosel

76 CDAC Network, Rumour has it: a practice guide to working with rumours, 2017. In multiple languages at: https://cdacnetwork.org/resources/20170610-rumour.

77 Norwegian Refugee Council's Community Coordination Toolbox available at: https://cct.nrc.no/.

F.4. DATA COLLECTION AND INFORMATION MANAGEMENT

Determine what data will be needed to inform response at different stages of the emergency, how it will be collected and used, and who is responsible.

Data on the size and characteristics of the evacuated population will be needed to ensure the needs of disaster-affected people can be met and their rights protected. Types of data collection include **profiling** of the overall evacuated population, and **registration** at an evacuation centre.

In the initial hours after an evacuation, the type of data needed (and able to be collected) may be minimal, e.g. estimated number of people affected. As time passes, the level of detail needed to inform response and then recovery usually increases, e.g. full registration in evacuation centres.

It is helpful to determine in advance: type of information to be collected, who is responsible for collecting and compiling, how data is recorded, shared, and stored, and how and who it is shared with for planning purposes (respecting data protection for any sensitive or personal information).

Types of data collection may include:

- **Overall profile of evacuees** (in evacuation centres, or hosted elsewhere).
  - Number of estimated evacuees
  - Number of verified evacuees, by age, sex, specific vulnerabilities
  - Number of evacuees in need of assistance, by age, sex, specific vulnerabilities
- **Evacuation centre data**, such as:
  - Region and municipalities hosting evacuees
  - Name and location of evacuation centres, including GPS coordinates
  - Basic services at evacuation centres (e.g. water, sanitation, health) and gaps (if any).
- **Registration of evacuees at an evacuation centre** – usually conducted by the designated evacuation centre manager/committee. Forms may be designed in advance. May include:
  - Personal information (e.g. name, age, gender, nationality if relevant)
  - Arrival date and original location
  - Specific vulnerabilities (e.g. people with disabilities, older persons, person affected by chronic disease) to determine any additional support needed

If evacuation transport is provided, basic registration for this may be conducted. Other assessments may need to be planned, e.g., on morbidity, movement of displaced people, impact of the disaster.

Data and information management plans should respect national privacy and data protection laws.

Key resources

- IASC Operational Guidance on Data Responsibility in Humanitarian Action[78] – for humanitarian actors conducting data collection and information management activities.
- For more detailed guidance see Collective Centre Guidelines[79] Chapter 6. Information Management and Registration and Camp Management Toolkit[80] Chapter 5 Information Management and Chapter 9 Registration and Profiling.

78 IASC, Operational Guidance on Data Responsibility in Humanitarian Action, 2023. At: https://interagencystandingcommittee.org/operational-response/iasc-operational-guidance-data-responsibility-humanitarian-action.

79 Global CCCM Cluster, Collective Centre Guidelines, 2010. In multiple languages at: https://cccmcluster.org/resources/collective-centre-guidelines.

80 Global CCCM Cluster, Camp Management Toolkit, 2015. In multiple languages at: https://cccmcluster.org/resources/camp-management-toolkit.

F.5. SAFETY AND SECURITY IN THE EVACUATION CENTRE

Detail provisions for maintaining safety and security in and around evacuation centres.

Typical responsibilities include the following, which likely fall under the responsibility of different actors. Responsible actors and their functions should be included in the evacuation plan:

- Security assessments of evacuation and transportation sites.[81]
- Maintaining general site security at designated evacuation locations, potentially including evacuees for prohibited weapons. [82]
- Preventing and/or responding to common crime and/or inadequate law enforcement.
- Preventing and/or responding to incidents of gender-based violence.
- Preventing and/or responding to the abuse, neglect, and exploitation of children.
- Overcoming discriminatory access to assistance (e.g. water, food, basic health services).

Displaced people from Marawi City take temporary shelter at the evacuation center in Saguiarian, Lanao del Sur, Philippines. © IOM 2017/Julie Batula

81 U.S. Department of Homeland Security and Federal Emergency Management Agency, Mass Evacuation Incident Annex, 2008, p.9.

82 Ibid.

F.6. PROTECTION CONSIDERATIONS IN THE EVACUATION CENTRE

Understand potential protection risks that may arise in evacuation centres, and detail measures to be taken to mitigate these risks.

Typical protection risks that may arise in evacuation centres include:[83]

- Gender-based violence
- Abuse, neglect and exploitation of children
- Obstacles in accessing personal identification documents
- Crime and/or inadequate law enforcement
- Conflicts among people staying in the evacuation centre and host communities
- Restrictions to freedom of movement and choice of residence for evacuees
- Limited representation and participation of certain groups in centre management
- Discriminatory access to basic provisions and services (e.g. water, food, shelter, health services)
- Risks resulting from family separation, e.g., for children, persons who rely on family support for survival

Host community relations

If an evacuation centre stays open in the longer-term, establish formal links between representatives of evacuees, local community, relevant responders, and local authorities.

Non-discriminatory assistance

Ensure that assistance is distributed equitably and impartially to all persons hosted in the evacuation centre, and at the same level between the different evacuation centres.

Gender-based violence (GBV) risk mitigation[84]

Assistance should be provided for survivors of GBV, risk mitigation activities must be put in place, and effective action to prevent and respond to GBV must be incorporated into all stages of the identification, setup, and management of evacuation centres. These should be properly communicated to users of the centre and to service providers (referral pathways). See: 2.1. Checklist for considering GBV and other protection risks in mass evacuation planning for disasters.

Accessibility for persons with disabilities

People with disabilities (physical, sensory, or intellectual/cognitive/mental), may face different types of barriers in accessing an evacuation centre, staying safely within it, and accessing facilities and services. This includes **physical barriers** *(e.g., staircases, lack of accessible toilets, inaccessible distribution locations or queues, barriers to arriving at the centre)*.

83 IASC, Operational Guidelines on the Protection of Persons in Situations of Natural Disasters, 2011.

84 GBV is an umbrella term for any harmful act done against someone's will, based on gender differences between males and females. It is often hidden and takes many forms such as physical and mental harm, threats, and coercion. It includes domestic and sexual violence, sexual exploitation and abuse, and trafficking. – IASC, Guidelines for Integrating GBV Interventions in Humanitarian Action, 2015.

Information and communication barriers are often faced by people with sensory disabilities (e.g. visual or hearing impairment). These can put people at risk in an emergency if they do not receive warnings. They may also mean people are excluded from receiving or asking for vital information about assistance and services, or information that will help them make decisions (e.g., on return). People with disabilities may also face discriminating attitudes in accessing services.

Effort should be made to reduce barriers in evacuation centres. *E.g., ensuring physical accessibility for people with disabilities (See* B.4. Identification of suitable shelter for use in evacuations*)* and making information available in accessible formats. If separated from any family caregivers or personal assistants, people may need additional support to access information or meet their basic needs. Some people with disabilities may require referral to specialized services, if available.

Family Reunification

Involuntary separation of family members frequently occurs during disasters. Existing evacuation guidelines call for a standardized, interoperable evacuee tracking and family reunification system. Designate responsible actors for unaccompanied and separated children (a specialist child protection actor or a trained focal point, respecting legal provisions), ensure referral pathways are in place, and information is available on family tracing and reunification.

Persons with specific requirements

People with specific requirements should be able to safely stay in the evacuation centre and use its facilities and services *(e.g., women and girls who may be at risk of GBV, persons with disabilities, LGBT+ people or minorities who may face discrimination or violence)*. Putting **referral pathways** in place, with the support of specialists, will allow evacuation centre staff to link individuals to specialized services, *e.g., mental health and psychosocial support, child protection services, medical care, police assistance, legal services, physical rehabilitation, mobility assistance devices.*

Accountability and complaints

People staying in an evacuation centre, or accessing services, should be able to ask for and receive information – and make complaints – about their services, rights, and entitlements. A complaints procedure should be set up by evacuation centre management, covering the centre and services. Individual service providers may also have their own procedures for receiving complaints.

Complaints procedures should:

- Have multiple ways to make a complaint, to be accessible for all; include ways to complain verbally (for people with low literacy, visual disabilities, children) and complain about staff.
- Complaints should be recorded in a standard form. Procedures should be in place to efficiently follow up on the complaint and give timely feedback to the complainant.
- Systems should be confidential. People should be able to make complaints anonymously.
- Information on how to make a complaint should be clear, and shared in different ways.

A monitoring system for sexual exploitation and abuse should be in place, by specialist actors.

BANGLADESH | Women's safety and evacuation centres[85]

In Bangladesh, cyclone mortality rates have historically been significantly higher for women than men. In the 1991 cyclone 140,000 people died; women were reportedly 4.5 times more likely to die than men. Elderly people and children also had higher death rates. Cyclone shelter construction and cyclone preparedness campaigns have since significantly reduced overall death rates in Bangladesh. However, gender-related social norms meant many women still delayed or did not evacuate to cyclone shelters. Generally, women are expected to protect livestock, household goods, and children, and not be in the presence of men who are not family. Single-room cyclone shelters, lack of gender-separated toilets, and lack of options for livestock are reported to deter women from evacuating. Women have reported harassment, sexual assault, and humiliation in evacuation shelters, especially when without their husbands.

Recent government policies and guidance seek to improve the safety of women in a disaster. The Government of Bangladesh's Standing Orders on Disaster (2019) stipulates measures to support women, children, and persons with disabilities to evacuate, and ensure safety in evacuation shelters. The Government's Evacuation Shelter Management Guidelines (2024) set out specific measures to help prevent and respond to GBV in evacuation centres.

Rohingya women at a safe space in the Balukhali refugee settlement in Cox's Bazar, Bangladesh.
© IOM 2018/Olivia Headon

85 Chowdhury TJ, et. al., 'Lived-Experience of Women's Well-Being in the Cyclone Shelters of Coastal Bangladesh'. Prehosp Disaster Med. 2022 Aug; 37(4):437-443 and Mari Miyaji, et. al., 'A study on the use of cyclone shelters in Bangladesh', Japan Architectural Review, August 2020, 82(737):1871-1880.

G. RETURN AND RECOVERY

Return is the final phase of evacuation. It is complete once all evacuees have returned to their place of residence (usually, people's preferred option), or have locally integrated, or resettled elsewhere. Return should be voluntary, safe, dignified, and well informed. Evacuated people may need support until they have found a solution to their displacement, as well as needing recovery support.

G.1. MANAGING RETURN

- **Identify the actor who has the authority to decide when return can start, any decision-making process, and the actor responsible for managing the return stage**
- **Detail responsible and involved actors, and requirements, to assess affected areas**
- **Identify the responsible actor for maintaining communication with affected people**
- **Identify support services that may be needed to facilitate return**

Authority to decide and manage return

Identify the person or government body that has the authority to decide when return can start, and the process for the decision to be made. The actor responsible for managing the return process should also be identified, which may depend on the hazard.

There may be legal issues to address in handling return, local integration, or relocation, such as land tenure issues or return over an international border. See: 4.3. Legal basis of evacuation plans.

Risk assessment

An objective and comprehensive assessment of affected areas should be conducted to establish if:

1. The hazard no longer poses a threat or has been diminished to the extent that it can be reasonably considered safe to return.
2. Conditions in the affected area are acceptable for the returning population. This may include:

- Presence of secondary or new hazards
- Infrastructure safety
- Restoration of key utilities (e.g. water, sanitation, electrical power)
- Availability of local accommodation, services (including health and emergency services), food, and safe water
- General security

Assessment teams may be multi-organizational, e.g., including government officials, infrastructure experts, and community representatives, and should be properly trained and equipped.

An evacuation plan ideally should include a template for a risk assessment, to enable assessments to be conducted quickly, according to technical standards, and consistently between areas. Including contact details for major infrastructure owners/ managers can be helpful.[86]

Return options and management

Different return options may be considered, such as:

- **Temporary re-entry** – for families to assess damage to property, collect belongings, or attend to livestock, following assessment of risk. Access may be individually permitted if urgent, such as for livestock owners to locate and feed animals.
- **Phased return** – with families from specific areas allowed back once conditions are safe, or allowing people with homes and businesses to return, but not visitors.[87]

Transport may need to be provided (or traffic management if people return in their own vehicles).

Support to returnees and communication

An evacuation plan should outline provision of support services, timely and accurate information, engagement of the community in the return process, and any additional support for specific groups.

The return phase may be stressful, particularly for people who have lost loved ones, livelihoods, or property. Damaged landscapes may be distressing, and people may be suffering psychological impacts from the disaster. Stress may lead to tensions, conflictual behaviour, and misinformation.

As for all other phases of evacuation, it is vital to ensure ongoing communication with affected communities. This includes sharing information on feasibility of return, and other options available to families. It should also include a feedback loop to those responsible for managing return processes.

Evacuees should be supported to make well-informed decisions about whether or when to return. Information should be provided on:[88]

- What to expect when they return (e.g. what they will see, smell, feel, and status of essential services such as power).
- Any remaining risks, and any mitigation in place, or that returnees may need to do.
- Transport and accommodation arrangements for those needing support to return .
- Any restricted areas, and reasons for restriction.
- Access to water, food, fuel and available services (e.g., healthcare, education, welfare).

86 Australian Institute for Disaster Resilience, Evacuation Planning, 2023, p.38.
87 Australian Institute for Disaster Resilience, Evacuation Planning, 2023, p.37.
88 Australian Institute for Disaster Resilience, Evacuation Planning, 2023, p.38.

G.2. TRANSITION TO RECOVERY

Detail how the transition of responsibility and coordination will be made from the actor/s responsible for managing evacuation centres/ assistance and return to recovery actors.

Evacuation and recovery plans should be linked, and lines of communication and coordination between emergency and recovery actors should be defined. The process of transition of responsibility between actors should be clear. Return processes will need to be coordinated between the entity responsible for managing return (under the evacuation plan) and the entity responsible for recovery.

Good coordination and information-sharing between emergency and recovery actors can help promote safe and dignified return and other durable solutions.

Planning for other options than return (**local integration or resettlement**) is usually the responsibility of recovery actors. Evacuation plans should, however, consider the possibility that people may not be able to return quickly, and should be linked with recovery plans. *E.g., transitional accommodation may be needed, providing higher standards than evacuation centres.*

G.3. CLOSING AN EVACUATION CENTRE

Especially in local evacuation plans, detail any requirements and decision-making process (and responsible decision-maker) for evacuation centre closure.

These might include standards for closure, and identification of responsible actors (and, budget allocation) for cleaning and repair so centres can resume their regular function or be ready for future use. It might include target timelines for closure (e.g., if standards in a centre mean its use is only recommended for hours or a few days, or to allow schools to re-open). Open communication on closure planning, and alternative accommodation, should be ensured with people staying in the evacuation centre. Safety and dignity of all individuals must be ensured.

Key resources

- Evacuation Centre Field Guide *Chapter 21. Preparing to Close*, Australian Red Cross.[89]
- Limiting and planning for schools as temporary evacuation centres[90] if using schools.
- For longer-term centres: Collective Centre Guidelines *Chapter 17. Collective Centre Closure*[91] and Minimum Standards for Camp Management *Chapter 5. Exit and Transition.*[92]

89 Australian Red Cross, Evacuation Centre Field Guide, 2023. At: https://redcross.org.au/sheltering/.

90 Save the Children, Limiting and Planning for Schools as Temporary Evacuation Centres, 2017.

91 Global CCCM Cluster, Collective Centre Guidelines, 2010. In multiple languages at: https://cccmcluster.org/resources/collective-centre-guidelines.

92 Minimum Standards for Camp Management, 2021. In multiple languages at: https://cccmcluster.org/resources/minimum-standards-camp-management.

H. RESPONSIBILITIES (ANNEX)

Identify and list the organizations or individuals responsible for each phase and action.

This section should outline who does what during each phase of an evacuation and the level of administrative organization (national, regional, local, etc.) involved. It will also help show how national, regional, and local efforts will be integrated during evacuation.

This information can be included in an annex to an evacuation plan. An annex can easily be updated and used as a quick reference in an emergency. Or, if an evacuation plan is short (e.g., a local-level operational plan), then responsible organizations may be listed under each section.

For each action, list the:

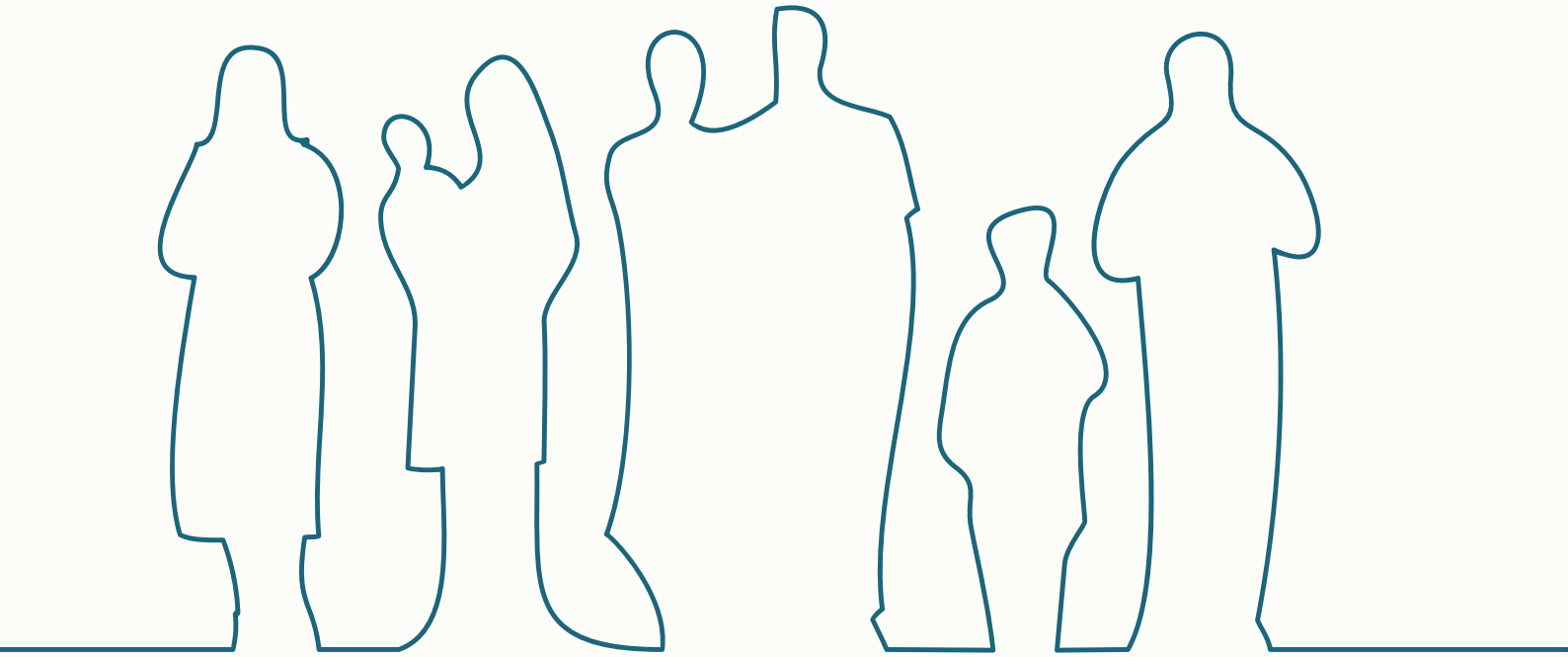
- **Coordinating entity** – responsible for decision-making, or ensuring an action takes place,
- **Cooperating entities** – other organizations or bodies that might provide support.

All agencies involved in the evacuation should have their roles and responsibilities clearly stated, including external stakeholders.

Some evacuation plans also list responsibilities by agency / organization, for ease of reference.

CCCM training and mass evacuation simulation exercise in Quezon City, Philippines. © IOM 2018/ Charissa Soriano

A woman carrying her children walks throug a flooded area in Gatumba, near Bujumbura, Burundi. © IOM 2024/Alexander Bee



ADDITIONAL GUIDANCE

4. ADDITIONAL GUIDANCE

Further information is provided here on some key topics. This can be used to help understand the topics or to guide analysis that is needed to develop a mass evacuation plan.

4.1. EFFECTS OF CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION

Climate change is causing more frequent, extreme, and unpredictable hazards. This means that historical experience may not accurately predict the magnitude of future events. To develop practical and comprehensive evacuation plans, it's crucial to consider a broader range of potential scenarios, including the most extreme conditions and impacts possible for each hazard. Evacuation plans should be adaptable to the scale and severity of a disaster, enhancing the overall response capacity.

For example, in coastal areas, rising sea levels and more intense cyclones may require expanding evacuation zones further inland and considering the potential need for larger evacuation shelters. In areas prone to wildfires, increasing temperatures and prolonged droughts may necessitate pre-emptive evacuations and the development of community-based fire response teams.

Environmental factors, such as deforestation, topsoil or coastal erosion, and other forms of ecosystem degradation, can also exacerbate the impact of hazards on communities. These factors should be integrated into evacuation planning. For instance, in areas with significant deforestation, evacuation plans should account for the increased risk of landslides and flash floods, ensuring that evacuation routes and shelters are located in safe zones. In areas experiencing coastal erosion, evacuation plans may need to consider the potential loss of critical infrastructure and the need for relocation of communities further inland.

By proactively considering the potential impacts of climate change and environmental degradation, evacuation plans can be made more robust and adaptable, ensuring the effective protection of communities in the face of evolving disaster risks.

IOM assessment of the area affected by Hurricane Dorian in Abaco, Bahamas. © IOM 2019/Muse Mohammed

4.2. LINKING LEVELS OF PLANS AND RESPONSE CAPACITIES

A disaster may overwhelm local response capabilities and resources, and require the use of capacities from other areas or levels of response (community, regional, national, international). It is important to understand how national or local (contextualized) evacuation plans fit into existing legal and operational frameworks at other levels. Plans should identify what additional resources or response capacities may be available and how they can be accessed, aiming for efficient response.

Key resources

- See www.disasterlaw.ifrc.org for resources, a document database, and online trainings.
- Disaster Risk Governance Guidelines[93] – IFRC
- Law and Disaster Preparedness Checklist & Synthesis Report, Ch.4. Evacuation – IFRC.[94]

Cross-border agreements –

See 4.4 Cross-border evacuation planning.

Domestic jurisdiction agreements

Agreements on alignment of evacuation plans or assistance that can be requested or given may be needed between different municipalities or districts within a single country. Local authorities should identify what agreements exist – or are needed – between domestic jurisdictions.

4.3. LEGAL BASIS OF EVACUATION PLANS

Legislation on evacuations

An evacuation plan is ordinarily based on domestic and international legislation relevant to **evacuations** and the **protection of and assistance to evacuees**. National, provincial, or local legislation often sets out information on the roles, responsibilities, authority, capacities, and resources of relevant stakeholders in an evacuation. This can include setting out rights and responsibilities of decision-makers and evacuees, what assets are available, and how to use them.

- Where this legislation exists, it should underpin the development of a mass evacuation plan.
- Where this legislat*ion does not exist, updating or introducing emergency or disaster management legislation on evacuations may be part of national preparedness activities.*

Other legal considerations

Other legal considerations relating to evacuations include (although are not limited to):

- **Land use:**
  - **Agreements with potential evacuation centres**, e.g., places of worship, schools
  - **Use of private land:** How will land be pre-identified, and how will landowners be compensated? Legal arrangement preparation for land issues in an emergency can help avoid complications that can worsen a crisis.

93 IFRC, Disaster Risk Governance Guidelines – Strengthening Laws, Policies and Plans for Comprehensive Disaster Risk Management, 2024 See Chapter 3. Preparedness, Anticipatory and Response.

94 IFRC, Law and Disaster Preparedness Checklist, 2019 and IFRC, Law and Disaster Preparedness Synthesis Report, 2019 available in multiple languages, along with other resources, examples, and trainings at: https://disasterlaw.ifrc.org/.

- **Rights of evacuees under existing legislation:** Do any laws support or deny mandatory evacuation? Does any local or national legislation regulate the type and minimum levels of assistance that evacuees are entitled to?
- **Custodial care for unaccompanied minors and family tracing** and reunification. See: 2.4 Considering Protection and separate '*Checklist for considering GBV and other protection risk migitation in mass evacuation planning for disasters*'.
- **Regulation of collection and sharing of personal data** (transport, evacuation centres)
- **Allocation of financial costs:** Identifying potential costs (e.g., for shelter, transport) and which institutions will pay helps efficient coordination and availability of resources. For slow-onset events, establishing potential costs of an evacuation beforehand may be used as a preliminary budget for seeking support from national or international donors.

Enforced evacuation

When people resist official evacuation orders, and efforts to encourage evacuation have been ineffective, authorities may consider whether people should be forcibly evacuated against their will as a last resort. The difference between **voluntary evacuations** and **enforced evacuations** (where people ordered to evacuate may be moved against their will) can be a sensitive legal issue. It is important to understand the relationship to existing laws. International guidance states that:

> *"Persons unwilling to leave should not be evacuated against their will unless such forced evacuation:*
>
> – *Is provided for by law;*
>
> – *Is absolutely necessary under the circumstances to respond to a serious and imminent threat to their life or health, and less intrusive measures would be insufficient to avert that threat; and*
>
> – *Is, to the extent possible, done after persons concerned have been informed and consulted.*[95]

Enforcing an evacuation order is a difficult decision. Consideration must be given to its effect on the rights to freedom of movement and residence and to privacy and home, issues of resources and authorities' abilities to enforce orders. Responders should not be put in situations of extreme risk.

Key resources

- See IASC, Operational Guidelines on the Protection of Persons in Natural Disasters *section A.1.2 on forced evacuation, for further rights-based considerations.*

95 IASC, Operational Guidelines on the Protection of Persons in Situations of Natural Disasters, 2011. These provisions correspond with the following fundamental human rights, provided within the International Covenant on Civil and Political Rights, Adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966, entry into force 23 March 1976, in accordance with: Article 6. Every human being has the inherent right to life; Article 12.1. Everyone lawfully within the territory of a State shall, within that territory, have the right to liberty of movement and freedom to choose his residence; Article 2. Everyone shall be free to leave any country, including his own; Article 3. The above-mentioned rights shall not be subject to any restrictions except those which are provided by law, are necessary to protect national security, public order (order public), public health or morals or the rights and freedoms of others, and are consistent with the other rights recognized in the present Covenant.

International guidelines on human rights and protection

The IASC Operational Guidelines on the Protection of Persons in Situations of Natural Disasters (2011) is a tool for governments and international and non-governmental humanitarian organizations, which **promotes a human rights-based approach** in situations of disasters.

This includes rights-based considerations, and suggested practical actions, for: protection against separation of families; protection against secondary impacts of disaster; protection against violence, including gender-based violence; security in communities and collective shelters.

The Guiding Principles on Internal Displacement provide guidance to states and all other authorities, groups and organizations on addressing the specific needs of internally displaced people, including evacuees. They identify rights and guarantees relevant to people's protection and assistance during displacement, and return or resettlement and reintegration. The Guiding Principles are consistent with international human rights law and international humanitarian law

Woman displaced by drought accessing water in an IDP camp in Dubuluk, Ethiopia. © IOM 2023

Key considerations for protection of persons in disasters include:

A.1.1 The life, physical integrity and health of persons exposed to imminent risks created by natural disasters, including in particular of persons with specific needs, should be protected, to the maximum extent possible, wherever those persons may be located.

A.1.2 If such measures are not sufficient to protect them, the departure of endangered persons from the danger zone should be facilitated.

A.1.3 To the extent that endangered persons cannot leave on their own they should be evacuated from the danger zone.

A.1.4 Persons unwilling to leave should not be evacuated against their will unless such forced evacuation... [see above for conditions]

A.1.5 Evacuations, whether voluntary or forced, should be carried out in a manner that fully respects the rights to life, dignity, liberty and security of those affected and displaced, and that does not discriminate against anyone. To the extent possible, the people concerned should be informed, in a manner that is accessible to them and in a language they can understand, of the likely duration and process of the evacuation as well as the reasons why it is necessary.

A.1.6 Persons who leave or are evacuated should be supported to stay as close to their places of habitual residence as the security/safety situation allows.

A.1.7 The designated evacuation centres or temporary shelter zones, which affected persons are brought to or received in, should be safe and not expose them to further risk.

Key resources

- Consult the IASC Operational Guidelines on the Protection of Persons in Situations of Natural Disasters (2011) p. 15-27 for an overview of protection and human rights considerations in evacuation planning, and suggested actions and preparedness measures.
- Consult the Guiding Principles on Internal Displacement (2004) on rights and guarantees relevant to the protection and assistance of internally displaced people.

4.4. CROSS-BORDER EVACUATION PLANNING

In border regions, or on small islands, some people may choose to evacuate themselves – or be supported to evacuate – across the border into a neighbouring country.

Within a mass evacuation plan it is important to anticipate any flow of people across a border (in either direction), and how this may affect the number and nature of evacuees seeking assistance. Foreign nationals or refugees may be among the evacuated population and may have specific requirements, as well as legal status implications, that should be planned for.

Additionally, **cross-border evacuation agreements** may be in place between national governments. These outline cooperation for response to disasters and assistance for foreign national communities for evacuation. Such agreements may be at national level; local authorities should identify and be aware of any agreements relevant to local evacuation plans.

Agreements may be bilateral or regional. They may include provisions for managing population movement across borders linked to border management (e.g., identity document requirements or waivers, or issuance of humanitarian visas), procedures for transportation (especially when by sea), provision of assistance and shelter in the receiving country, and longer-term solutions.

Key resources

- Cross-border evacuation protocol for countries in the Eastern Caribbean, IOM.[96]

CARIBBEAN | Cross-border evacuations[97]

Caribbean States have implemented cross-border evacuations multiple times, drawing on existing regional agreements and bilateral agreements to move people as safely as possible.

In 2021, the authorities of Saint Vincent and the Grenadines ordered a mandatory evacuation after seismic activity indicated that La Soufrière volcano on the island of St Vincent was in danger of erupting. Around 16,000 people were living in the red zone. Due to the risk, and the small size of the island, people were evacuated off the island and transported to neighbouring States.

Evacuation of island residents was coordinated between the Government of Saint Vincent and the Grenadines, cruise lines who provided transport (along with small ferries and fishing boats), and receiving countries including Saint Lucia, Grenada, Barbados, and Antigua and Barbuda.

The evacuation procedures were based on mostly bilateral country agreements. Most of the receiving countries were Protocol Members of the Eastern Caribbean Economic Union, which allows travel using national identification documents. The Government of Saint Vincent and the Grenadines engaged other governments to request they admit evacuees without passports.

96 IOM, Cross-border evacuation protocol for countries in the Eastern Caribbean in context of disasters, 2023.
97 IOM, Evacuations and Disaster Risk Reduction in the Caribbean, 2021.

4.5. CRITICAL PUBLIC FACILITIES EVACUATION PLANS

Additional critical public facilities evacuation plans are often created for institutions or populations with specialized evacuation needs, such as hospitals, schools, and prisons. Such plans are the responsibility of those in charge of caring for such individuals. Typically, hospitals are responsible for evacuating patients, schools for evacuating children during regular school hours, and prisons for evacuating prisoners.

It is vital for these plans to fit into broader evacuation frameworks to ensure evacuees are moved in good time and to appropriate safe zones, and to communicate about the plans in place.

For similar populations that receive care privately, such as in-home child or medical care, consider including specialized messages in preparedness phase community outreach to ensure caregivers are aware of how to meet the specialized needs of those in their care during an evacuation.

Key resources

- 'Planning for Emergencies in Facilities' Standards Australia Committee.[98]

JAPAN | School evacuation preparedness[99]

In March 2011, Japan was hit by a magnitude 9.0 earthquake, which caused a mega-tsunami. Due to good evacuation preparedness in schools, almost all the nearly 3,000 elementary and junior high school students of the city of Kamaishi survived. Immediately after the earthquake struck, the students ran out of the school to higher ground, prompting other school children and many residents to do the same. Older students supported younger ones to reach a safe location while the tsunami swept away their schools and town.

The students' prompt response was the result of a tsunami disaster prevention education programme that Kamaishi schools had been working on over the previous several years. It had been observed that although Japan's coastal regions had been warned of a possible major earthquake, the alert level among people was low. Katada, a professor and former flood prevention specialist, made it his mission to increase disaster preparedness among children. He collaborated with teachers in Kamaishi and they came up with classroom plans and activities to teach children about tsunamis and the importance of evacuation.

Katada created three principles of evacuation: First, do not put too much faith in hazard maps, as they are based on outdated assumptions – a new tsunami can have a different scale. Second, make the best efforts to deal with the situation – by moving to higher ground and helping each other out. Third, children should take the initiative in any evacuation and be the first ones to evacuate, so others can follow. In the 'miracle of Kamaishi', these principles were followed and proved life saving for the children and other residents.

98 Australian Standard, 'Emergency Management Procedures – AS 3745 Planning for Emergencies in Facilities', Standards Australia Committee FP-017, 2010. At: https://evaculife.com.au/as_3745_planning_for_emergencies_in_facilities/.

99 Government of Japan, Public Relations Office, 'The Miracle of Kamaishi: How 3,000 students survived 3/11'.

4.6. EARLY WARNING SYSTEMS

A comprehensive Early Warning System should ideally be in place before an evacuation plan is developed, as it is crucial to much of the evacuation process.

By identifying upcoming hazards as early as possible, an early warning system enables individuals, communities, and organizations to prepare and act appropriately and in sufficient time to minimise disruption and damage.[100] Evacuations might be undertaken in response to early warning, before a risk becomes critical and the ability to move quickly and safely is limited. After the initial event, disasters are highly dynamic situations that require close, continuous monitoring.

An early warning system is made up of four elements:[101] Each needs the participation of people at risk.

1. Knowledge of disaster risks (baseline understanding of risks (hazards and vulnerabilities)).
2. Detection, monitoring, analysis, and forecasting of hazards.
3. Communication or dissemination of alerts and warnings.
4. Preparedness and capabilities to respond to the warnings received – e.g. through pre-season mitigation activities, evacuation, or duck-and-cover reflexes.

The term "end-to-end warning system" is used to emphasize that warning systems need to include all steps from hazard detection through to community response.

Some early warning systems are national-level, the responsibility of specialized institutions with legal mandates, and utilizing technology to detect hazards and disseminate information. Community early warning systems are at local level, often informal and involving volunteers. These systems can be integrated: communication in a community early warning system may triggered by personal local detection of a hazard or receipt of a warning from the national system.

Key resources

- RR's Guide to Multi-Hazard Early Warning Systems, examples and other tools.
- Resources from Early Warnings for All initiative, aiming that all people are covered by multi-hazard early warning systems by end of 2027.
- IFRC's Community Early Warning Systems: Guiding Principles and Community Early Warning Systems (CEWS) Training Toolkit – Field Guide – for creating community early warning systems, or strengthening and linking to national systems.

100 World Meteorological Organization 'Early Warning System' https://wmo.int/topics/early-warning-system; IFRC, Community early warning systems: guiding principles, 2012, adapted from UNISDR, 2009.

101 World Meteorological Organization 'Early Warning System' https://wmo.int/topics/early-warning-system; IFRC, Community early warning systems: guiding principles, 2012, adapted from UNISDR, 2009.

4.7. EVACUATION TIMING MODELS

Timing is crucial in deciding when to trigger an alert and in carrying out an evacuation, and it is often impacted by a variety of considerations. It is important to plan how to time a mass evacuation under many different conditions to understand how to most effectively time an evacuation in an actual emergency.

Timing models should show considerations for:

- Mobilization of resources
- Dissemination of evacuation warnings
- Warning Acceptance Factor (WAF) – time taken for people to accept a warning is real
- Warning Lag Factor (WLF) – the time allowance for packing and getting ready to leave
- Movement of people within the area to outside of the evacuation zone
- Traffic Safety Factor (TSF) to allow for breakdowns and road crashes
- Differences in timing based on conditions, such as evacuations at night versus during the day, or sudden – versus slower-onset events (earthquake, or a typhoon).

4.8. PUBLIC INFORMATION

Public information management is a continuous task both as part of preparedness and throughout an evacuation. People need to be kept informed of developments as they occur, and opportunities for rumours and speculation may need to be minimized or addressed.

Early warning systems should be closely linked with public information, during preparedness work. People need to be aware of the existence of the early warning system, and how they might receive messages. They also must be aware of what self-protective measures they can take once the early warning system is triggered. *E.g., if sirens are triggered to alert for a possible tsunami, people must know what they should do and where to go.* See: B.1. Hazard monitoring and B.3. Prepare the population for an evacuation.

- Public information during an evacuation might include posting signs warning about existing hazards in an area, or guiding evacuees to safe zones, which can be particularly important to self-evacuees. D.1 Warning – Converting early warning system data to public warnings.
- Public information efforts will need to continue after the event, to keep populations updated on the evolution of hazards, whether or not it is safe to return, and shelter and assistance options. See: F.3 Emergency shelter and assistance – Public information after evacuation.
- Defining the coordination mechanisms with media and community outlets is important to help disseminate official warnings and ensure coverage avoids rumours and speculation.

4.9. INCLUSION OF IDPs LIVING IN DISPLACEMENT SITES

People who are already displaced (including IDPs: internally displaced persons) may have reduced coping capacities and higher vulnerabilities, arising from their existing situation, in a new disaster.

They may face higher or different risks than local communities. People may be living in higher-risk areas, be staying in temporary shelter which gives limited protection from hazards, and have lower access to services. If displaced from outside the area, people may lack local knowledge about risks, early warning system messaging, and what to do in an emergency following an evacuation order.

Considerations include:

- Plan to include these groups in existing mass evacuation plans, including ensuring evacuation shelters have sufficient capacity and assistance available.
- As part of preparedness, conduct specific outreach to ensure displaced people are informed about risks, early warning system messaging, and what to do in an evacuation.
- If displacement sites or camps are present in the hazard area, local authority emergency and evacuation protocols may need to be specifically extended to cover these. If extending the protocols is not feasible in the context, appropriately adapted protocols may be needed to minimize risks for people living in these sites in the event of a disaster.
- Camp management actors working within or outside displacement sites, and other humanitarian actors who are providing assistance and services to IDPs, may be key actors to include in planning, and able to support both preparedness efforts (especially community engagement and information-sharing) and response for evacuees.

Informal settlement in Ladan, Doolow, Somalia hosting nearly 3,000 persons displaced by drought.
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4.10. INCLUSION OF MIGRANTS

Any evacuation plan should consider needs of different populations in the area. Specific consideration of how to include migrants may be needed, especially in areas with high populations. Engagement with major employers of migrant workers may be helpful to develop planning.

Migrants may experience higher or different risks during a disaster than local communities, due to factors including: living in higher-risk areas; language barriers; and lack of knowledge of local context and risks, early warning system messaging, and what to do locally in an emergency.

Factors to consider include:[102]

- Migrants may live and work in areas more exposed to hazards and environmental degradation, separated from other communities, or lacking basic infrastructure and services.
- Migrants' culturally-learned reactions to disasters, conflicts, and warnings.
- Which actors may be best placed to communicate and interact with migrants (e.g., if people mistrust authorities, how to reduce presence of uniformed officials in evacuation areas).
- Dedicated transportation, as migrants may have limited access to privately-owned vehicles.
- Multilingual speakers and signage to guide migrants to access services and assistance.
- Ensuring assistance accounts for migrants' food, religious, privacy, or linguistic needs.
- Ensure migrants are included in community-based planning on evacuation.

Migrants' States of origin may take action to support their citizens when early warning is issued or after an evacuation, and considerations of this may need to be included in evacuation plans.

Key resources

- Guidance on involving migrants in contingency planning, MICIC Initiative, IOM.

Migrants in Countries in Crisis (MICIC) guidance

The Guidelines to Protect Migrants in Countries (or MICIC guidelines) provide practical, non-binding, voluntary guidance for States, private sector actors, international organizations, and civil society to protect migrants. These include principles, guidance, and practices. They are accompanied by trainings and e-learning, including for emergency responders. This includes guidance on incorporating migrants in prevention, preparedness, and emergency response systems (Guideline 4) and on including migrants in all aspects of contingency planning, such as evacuation planning (Guideline 5).

Materials are available at: https://micicinitiative.iom.int/

102 IOM, 'Practices to Implement Guideline 5: Involve migrants in contingency planning and integrate their needs and capacities', Migrants in Countries in Crisis (MICIC) Initiative. https://micicinitiative.iom.int/practices-implement-guideline-5.

4.11. TOURISTS AND VISITORS

Evacuation plans may need to give specific consideration for tourists and visitors, especially in popular tourist destinations, so they receive early warning messages and know what actions to take.

Considerations include:[103]

- Lack of knowledge of local language, context, and hazards – consider multi-lingual information and what mechanisms of early warning message dissemination to use.
- Involving tourism and accommodation providers in evacuation planning and/or encouraging large hotels and tourist resorts to develop their own plans, that align with overall evacuation planning. See: 4.5 Critical public facilities evacuation plans.
- Signposting evacuation routes, evacuation centres, or assembly areas.
- Planning additional services, essential supplies, and capacity in evacuation centres.

States of origin may take action to support their citizens when early warning is issued or after an evacuation, and considerations of this may need to be included in evacuation plans.

The MICIC guidance may be useful to identify considerations specific to tourists and visitors.

4.12. LIVESTOCK AND EVACUATION

Plans for livestock may need to be included in evacuation planning. This is so livestock keepers do not risk their lives by remaining in at-risk locations to guard or care for livestock rather than evacuating, and to minimise livestock loss and negative impact of the disaster on livelihoods.

Livestock evacuation plans should be developed with the local community. Such community-level planning may take place after the development of a local-authority led evacuation plan.

Potential planning actions include:[104]

- For emergencies where early warning can be given (e.g. cyclones, wildfire, flooding, volcanic eruption) work with local communities to develop livestock evacuation plans and evacuation enclosures for animals nearby to human evacuation centres.
- Ensure livestock evacuation routes do not block routes to human evacuation centres.
- Untethering animals (marked with paint after early warning is given) to avoid risk of being caught in the hazard or starvation if families are unable to return.

Key resources

- See Livestock Emergency Guidelines (LEGS), especially Chapter 7 – Standard 1: Preparedness for technical guidance and considerations.

103 Australian Institute for Disaster Resilience, Evacuation Planning Handbook, 2023.

104 LEGS, Livestock Emergency Guidelines and Standards, Third edition, 2023. See especially 'Chapter 7 – Standard 1 Preparedness', pages 268-282. In multiple languages at: https://livestock-emergency.net/legs-handbook-third-edition/.

4.13. PUBLIC HEALTH EMERGENCY CONSIDERATIONS

Significant outbreaks of communicable disease, or epidemics, may affect areas at risk of hazards. Consideration may be needed to adapt or provide additional guidance for evacuation planning, to reduce transmission risks during and after evacuation and to help keep high-risk individuals safe. A ministry or directorate of health, and any government body responsible for managing public health emergencies, may need to be included in any evacuation planning committee.

During the COVID-19 pandemic, many countries issued additional guidance on evacuation planning, including adjustments to existing emergency shelter (evacuation centre) practices. Research has suggested an association of disaster intensity and higher rates of COVID-19, with a decrease in spread of COVID-19 when people sheltered-in-place.[105]

Considerations included:

- Including messaging on health risk prevention alongside evacuation messaging, to acknowledge concerns and advise people on mitigation.
- Account for people to potentially delay decision-making on evacuation due to health concern.
- Improving messaging for areas not at high-risk from a hazard where people can shelter-in-place, to reduce 'shadow evacuation'.
- Identifying high-risk individuals; offering alternative accommodation to evacuation centres.
- Modifying evacuation transport protocols to incorporate public health best practices, for evacuees and first responders.
- Making provisions in evacuation centres, such as: reducing occupancy numbers; using hotels for single-room occupancy; screening evacuees for illness on arrival; providing isolated areas for ill evacuees; providing personal protective equipment to staff and evacuees; increasing sanitation and handwashing facilities.

Key resources

- Emergency Evacuation and Sheltering During the COVID-19 Pandemic, National Academies.[106]
- Evacuation Centre Operational Considerations: COVID-19, Australian Red Cross.[107]
- Guidance for emergency planners and responders - COVID-19, United Kingdom.[108]
- 'Emergency evacuation procedures during the COVID-19 pandemic' Open-source compilation of examples, and sources, from evacuation experiences.[109]

105 Page-Tan C, Fraser T., 'COVID-19 to go? The role of disasters and evacuation in the COVID-19 pandemic', Global Environmental Change, 2022 March 73:102471.

106 National Academies of Sciences, Engineering, and Medicine. Emergency Evacuation and Sheltering During the COVID-19 Pandemic, 2021. At: https://nap.nationalacademies.org/catalog/26084/emergency-evacuation-and-sheltering-during-the-covid-19-pandemic.

107 Australian Red Cross, Evacuation Centre Planning and Operational Considerations – COVID-19, July 2021.

108 UK, Health Education England, Guidance for emergency planners and responders for evacuating people in the context of COVID- 19, 2020.

109 'Emergency evacuation procedures during the COVID-19 pandemic'. Accessed September 2024. At: https://en.wikipedia.org/wiki/Emergency_evacuation_procedures_during_the_COVID-19_pandemic.

4.14. TRAININGS AND SIMULATION EXERCISES

Trainings

Trainings on principles for mass evacuation, and on how to conduct evacuation planning processes may be helpful for those who are either responsible for, or closely support, evacuation planning.

Simulation exercises

Simulation exercises can be used to:

- Start the process of developing an evacuation plan (through tabletop exercises).
- Test emergency plans during development, or periodically, to identify weaknesses and gaps.
- Ensure responders and communities have good knowledge of the plans and the best actions to take, and for responders to put into practice conceptual techniques.

Different methods may be appropriate for different groups. Involving community members in full simulation exercises can be helpful to create a more realistic scenario for responders. However, large-scale community awareness is likely better supported by public awareness campaigns.

Methods include:[110]

- **Table-top exercises** – facilitated discussions on an emergency situation, aiming to resolve problems, refine plans, and understand responsibilities, resources, and procedures. Can be used with groups of key stakeholders to help develop an evacuation plan.
- **Drills** – where a single specific component is tested, to review and improve part of a plan.
- **Full simulation exercises** – these might be 'functional', testing one organization, or 'full-scale', simulating a real event and involving all responders. The aim is to test plans in a highly stressful environment, identifying gaps in familiarity and mistakes in the plan.

Key resources

- **Materials for trainings and simulation exercises** on mass evacuation developed by IOM to complement this Guide, which can be adapted to context. Available on request.[111]
- Guidelines on Design and Conduct of Simulation exercises and examples, UNDRR.[112]

110 UNDRR, Words into Action Guidelines – Design and Conduct of Simulation Exercises (SIMEX), 2020 Available to download at: https://undrr.org/publication/words-action-guidelines-design-and-conduct-simulation-exercises-simex See also examples: https://preventionweb.net/collections/words-action-concise-guide-design-and-conduct-simulation-exercises.

111 Contact: support@cccmcluster.org.

112 UNDRR, *Design and Conduct of Simulation Exercises – SIMEX*, Words Into Action: Companion for implementing Sendai Framework Priority 4, 2020. Examples of simulation exercises are available at: https://preventionweb.net/collections/words-action-concise-guide-design-and-conduct-simulation-exercises.

UGANDA and KENYA | Cross-border simulation exercises[113]

Eastern Uganda has been experiencing larger and more frequent flooding events in recent years, with heavier and changing patterns of rainfall linked with climate change exacerbated by environmental factors including clearance of land for agricultural and residential use. In 2022, heavy rains caused flooding and landslides across three districts near the border with Kenya, resulting in substantial damage to homes and infrastructure, loss of life, and the evacuation of several thousand people.

In this context of increased hazards, Ugandan and Kenyan authorities have been conducting joint planning for response to hazards in the region, including on how any displacement across national borders will be responded to and coordinated. In 2023, multi-sectoral teams from Uganda and Kenya conducted joint simulation exercises in Mbale, eastern Uganda.

The joint simulation exercises brought together responsible actors from the Prime Minister's Office, National Disaster Operations Centre, local authorities and mayoral offices, uniformed first responders, and migration and disaster risk management authorities. A hypothetical scenario was given to the teams – a scenario of heavy rains resulting in flooding and landslides, which required people to evacuate (and caused displacement) internally and across the country border.

Through role-plays and scenarios, the teams followed and tested Standard Operating Procedures (SOPs) on response and exchanged ideas with their counterparts based on recent experiences of flood disaster response. Guidelines and procedures that were tested included on entry and reception, registration and stay in temporary shelters, and assisted return or extended stay. This process of testing the SOPs identified where changes were needed, with amendments to the SOPs planned after the simulation exercise.

113 'Uganda and Kenya Conclude Simulation Exercise on Managing Cross-Border Disaster', Platform on Disaster Displacement, 25 May 2023. Available at: https://disasterdisplacement.org/news-events/simulation-exercise-on-managing-cross-border-disaster-displacement/; IFRC, 'Uganda: Flash Floods & Landslides: Situation Report – Emergency Plan of Action', ReliefWeb, 15 August 2022. The exercise was supported by the Inter-Governmental Authority on Development (IGAD), Platform for Disaster Displacement (PDD), and IOM.

Extended examples

BANGLADESH | Cyclone preparedness and evacuation[114]

Bangladesh is one of the most disaster-prone countries in the world, with the frequency and impact of disasters increasing due to the impact of climate change. The Government of Bangladesh's 'Standing Orders on Disaster' and the 'Disaster Management Act' set the legislative framework for disaster management, identifying responsible actors and detailing their specific roles, covering multiple hazard risks. In a disaster situation, the National Disaster Management Council (NDMC) and the Inter-Ministerial Disaster Management Coordination Committee coordinate at a national level, and Disaster Management Committees (DMCs) at different administrative levels (regional, district, and local level). The DMCs have a defined membership of multiple government agencies and technical and civil society actors.

Early Warning and the Cyclone Preparedness Programme

Under the Government of Bangladesh's overall disaster response framework, the national Cyclone Preparedness Programme (CPP) was established in 1973, jointly with the Bangladesh Red Crescent Society (BDRCS). The CPP has a network of thousands of community volunteers, trained every year on the Early Warning System and equipped with early warning and search and rescue kits.

Bangladesh's early warning systems uses a variety of communication methods, including TV and radio broadcasts, push messages via mobile phone networks, targeted SMS notifications, and a helpline that people can dial to listen to pre-recorded voice messages. Plus, in coastal areas, a flag system showing early warning levels for cyclones. For cyclones, once the government issues an evacuation order, BDRCS and the CPP send alert information to all affected CPP offices. The local volunteers are then mobilized to disseminate Early Warning messages and evacuate families at risk to cyclone shelters.

Cyclone Mocha evacuation

In May 2023, an extremely severe cyclone, Cyclone Mocha, struck the coastal areas between Cox's Bazar in Bangladesh and nearby areas in Myanmar. Early Warning and subsequently an evacuation order was issued. Evacuation was coordinated by the local authorities, supported by the CPP volunteers and BDRCS. In addition to the cyclone shelters in the area, all hotels and motels were instructed to open as evacuation facilities, in accordance with the government's contingency plans for a mass evacuation. The government also instructed for schools/madrassas and religious buildings to be used to help accommodate the large numbers of evacuees. Over 750,000 people were evacuated in Cox's Bazar and surrounding areas, to 576 cyclone shelters. Some injuries were reported in both host communities and the camps, but no deaths.

114 Bangladesh Red Crescent Society, Cyclone Preparedness Programme, IFRC, American Red Cross, Case Study: Collective efforts for preparedness and anticipatory action pay off ahead of Severe Cyclone to hit Bangladesh, April 2024 At: https://preparecenter.org/wp-content/uploads/2024/06/Cyclone-Mocha-Case-Study_april_2024.pdf.

IFRC, 'Cyclone Mocha: Access and time of the essence to help affected families in Bangladesh and Myanmar, Press release'. 16 May 2023; United Nations Bangladesh, 'Bangladesh: Cyclone Mocha Humanitarian Response Situation Report As of 14 May 2023'.

Response in Rohingya refugee camps:
Early warning and internal evacuation for at-risk people

In 2018, the CPP and national Early Warning System was extended to the cover the camps in Cox's Bazar district hosting nearly a million Rohingya refugees in 33 camps. The mechanism is collaboratively supported by national and local disaster management authorities, local authorities responsible for camp management, BDRCS, IFRC, and international humanitarian actors.

In each camp, 100 volunteers (equal men and women) were selected to act as first responders in emergencies. They are trained twice a year on disaster preparedness, Early Warning, first aid, light search and rescue, and issued with early warning, first aid, and light search and rescue kits, and personal protective gear. The Disaster Management Committees are also replicated at camp level, including representatives from government camp management, fire service and civil defence, other government authorities, and humanitarian actors. The camp CPP volunteers and humanitarian actors regularly conduct cyclone preparedness awareness-raising, including door-to-door outreach, drills and demonstrations. Specific outreach is made to women, young people, and people with disabilities. Weather forecast analysis is shared by BDRCS/IFRC to humanitarian actors, to allow them to take early action to prepare.

When early warning for Cyclone Mocha was issued, the camp Disaster Management Committees mobilized the 3,300 camp CPP volunteers, supported by 45 CPP host community volunteers. They disseminated Early Warning messages and raised cyclone signal flags in the camps. Most of the camp population is warned to shelter-in-place, and to prepare their families and tie-down their temporary shelters. The CPP volunteers also compile lists of extremely vulnerable individuals, supporting them to evacuate internally from most at-risk places (e.g, at risk of landslide or flooding) to safer places (more robust structures such as temporary learning centres and community centres). For Cyclone Mocha, it is considered extremely likely that these actions reduced casualties and mitigated unprecedented damage in the camps.

ITALY | Earthquake evacuation lessons[115]

In Italy, civil protection structures at central, regional, provincial and municipal level coordinate their operations and resources with non-governmental actors through a top-down, bottom-up organizational system that works at short notice and in real time. The National Civil Protection Service provides a legally recognized institutional form, with its mandate to protect human life, health, economic assets, cultural heritage, human settlements and the environment from disasters. In national emergencies, the Head of Department of Civil Protection (DCP) convenes the Civil Protection Operational Committee, which defines intervention strategies, and coordinates deployment of national resources and emergency activities.

L'Aquila earthquake response

At 03:32 on 6 April 2009, a devastating earthquake hit L'Aquila and other municipalities in the Abruzzo Region. The earthquake of 5.8 magnitude on the Richter scale and 8.8 km deep, was felt in most areas of central Italy, killing 308 people and injuring over 1,500. Much damage to public and private infrastructure was reported, as well as significant losses to the area's rich cultural heritage. A few hours after, the Head of the DCP convened the Operational Committee, and from the evening of 6 April, the Direction of Command and Control (Di.Coma.C.), which represents the national coordination centre for the civil protection components and operating units in case of national emergency, was fully operational in L'Aquila.

Many buildings were evacuated, and 67,000 people were hosted in shelter provided by the National System of Civil Protection, and in public and private buildings. Field kitchens were set up. Over 17,000 staff and first responders were mobilized from fire brigades, the army, police forces, Red Cross, and volunteers.

Key lessons from the experience of the emergency management of L'Aquila earthquake

1. An Operational Directive, signed by the Prime Minister on 3 December 2008, and addressed to the different actors of the civil protection system, was essential to clarify the general procedures at all levels of the command and control chain, thus facilitating the communication among them.
2. The operation centres were set up during the response phase. It is better to identify in advance the location of these centres in order to save time.
3. The coordination during the first response phase was guaranteed by a single central operation center (Di.Coma.C.). This has been recognized as an added value.
4. Population shelter areas: The emergency areas for people to receive assistance were identified and set up in real time. Emergency planning should identify these shelter areas in advance.

115 Italian Department of Civil Protection, example for MEND Guide, 2013.

5. The criteria followed for the set-up of 171 shelter areas was based upon the principle of proximity (to areas of origin) to avoid moving people far away. However, such a geographically-distributed shelter system was difficult to manage. It is important that the quality of the facilities be standardized.
6. A prompt activation of the national Operational Committee to guarantee the overall coordination, with a direct link between the decisional and technical level, was a key success.
7. Another key element was the wide use of public organization resources – especially army and fire brigades for logistics and setting up of shelter areas.
8. Aiming for proximity, public services (schools, banks, pharmacies, etc.) were provided inside the shelters. Providing public services in meeting and aggregation points that can be easily reached by the population contributes to re-create a feeling of community.
9. It is essential to have a municipality representative inside the camps to disseminate information and to collect the requests of the population.
10. The necessity of establishing common spaces to be used for organizing public assemblies of the population inside shelter areas. To have an active civil society in the long-term reconstruction phase, it is essential to adopt measures useful for rebuilding social structures.

A volunteer supporting the Türkiye-Syria earthquake response carrying blankets in front of a damaged building in Nurdagi, Gaziantep, Türkiye. © IOM 2023/Emrah Özesen

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IOM assessment of the area affected by Hurricane Dorian in Abaco, Bahamas.© IOM 2019/Muse Mohammed

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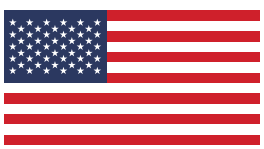

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