THE MEND GUIDE

Comprehensive Guide for Planning Mass Evacuations in Natural Disasters

PILOT DOCUMENT

CAMP COORDINATION
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Funded by the European Commission

IOM • OIM

UNHCR
The UN Refugee Agency

iDMC internal displacement monitoring centre

FOREWORD

Millions of people have to evacuate their homes every year to avoid danger and seek safety out of harm's way from potential or actual disasters. The Internal Displacement Monitoring Centre (IDMC) estimates that 32.4 million people were newly displaced by sudden-onset disasters in 2012 alone. Timely, well prepared and effectively managed evacuation processes are critical to the survival and protection of exposed and vulnerable people before, during and after the onset of disaster.

The manner in which evacuations are carried out may significantly affect the ability of practitioners to manage assistance to populations in evacuation sites. Some national disaster management authorities in disaster-prone countries have extensive experience in mass evacuations. For example, countries such as the Philippines and China have well-established procedures to evacuate hundreds of thousands, if not millions, of people from areas prone to natural disasters. Other countries find the process challenging or they have limited access to comprehensive guidance to manage the necessary planning process.

This Comprehensive Guide for Planning Mass Evacuations in Natural Disasters – the MEND Guide – came to life at the request of several countries and national disaster management authorities to address this gap and provide a quick reference document containing practical guidance. It also attempts to bring together emergency planning needs and humanitarian considerations which are complementary in so many ways.

This pilot version of the MEND Guide is the result of a collective effort initiated by the Global Camp Coordination and Camp Management (CCCM) Cluster. A Steering Committee with representatives from different countries and international organizations was assembled and their active contributions were received on successive versions of the guidance. Appreciation for participation and contributions are offered to the representatives of Cuba, Cyprus, Iceland, Italy, Japan, Malta, Nepal, Portugal, Sweden, United Kingdom, United States of America, International Organization for Migration (IOM), United Nations High Commissioner for Refugees (UNHCR), United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), Internal Displacement Monitoring Centre (IDMC), International Federation of the Red Cross and Red Crescent Societies (IFRC), Professor Duncan Shaw of the Warwick Business School, Elizabeth Ferris of the Brookings Institution, the Global Protection Cluster and the European Commission Directorate General for Humanitarian Aid and Civil Protection (DG ECHO).

Further thanks are given to IDMC for the insights shared and continued support throughout the drafting of the MEND Guide. IDMC is a leading source of information, data and analysis on internally displaced persons worldwide, and a key collaborator of the CCCM Cluster.

Special thanks are given to Vera Goldschmidt of IOM in acknowledgement of her work in facilitating the Steering Committee and leading the drafting of the Guide. A special mention should also be made of those who have also assisted in the drafting of the Guide – Julia Pacitto, Mallory Carlson, Debora Gonzalez, Anna Reichenberg of IOM, Andrew Cusack of UNHCR, and Michelle Yonetani of IDMC.

The Global CCCM Cluster would like to thank DG ECHO, which has generously funded this initiative.

During the next months we hope to continue the broad consultation process to ensure further contributions are received and the guidance is refined.

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INTRODUCTION

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The purpose of evacuations is to save and protect the lives of people exposed to actual or imminent danger through their timely and rapid movement to safer locations and places of shelter. In some contexts related to the threat and impact of natural hazard events such as severe storms, floods, earthquakes and wild fires, hundreds to millions of people may need to move within a very short period of time. Planning for such situations is critical to effectively mobilize and coordinate capacity and resources, and manage the safe and timely evacuation of all persons at risk, to meet emergency needs for shelter and assistance, and to ensure evacuees and other affected people are able to recover from the disruption and risks created by their displacement as safely and quickly as possible.

Responsibility for developing evacuation plans to manage such situations often falls within the remit of a country's Disaster or Emergency Management Agency, which is tasked not only with planning and implementing emergency response mechanisms, but also with ensuring the overall protection of disaster-affected people. There is no "blueprint" evacuation plan that can be applied to cover all situations. Any plan must be based on the particular risks and potential scenarios for different people living in, working in, or just visiting an exposed area should evacuation become necessary, and be further adapted according to the actual situation as it evolves. At the same time, it is recognized that experiences from across different countries may provide useful, generic guidance to support evacuation planning. This guide has been developed in response to requests for assistance in this area and through consultation with a Steering Committee of representatives from government authorities together with experts from IOM, UNHCR, UN OCHA, IFRC, IDMC and academia. While it focuses on mass evacuations in the context of disasters related to natural hazard events, many of the actions suggested in this guide may also be applicable to other types of disasters and to planning for the evacuation of smaller groups of people.

1.1 THE IMPORTANCE OF COMPREHENSIVE AND CONTEXT-SPECIFIC EVACUATION PLANNING

Where the rapidly-developing need for evacuation has been identified, having a pre-agreed and disseminated evacuation plan that can be quickly adapted to the specific situation is essential to a timely response. Well-developed plans also help ensure that risks to evacuees during the evacuation process itself, and in places of refuge, are well managed to avoid negative impacts on the rights and vulnerability of evacuees and other affected people[1].

People displaced from their homes or places of habitual residence by disasters, including evacuees, often face particular risks due to their displacement. International research shows that long-term psychological and social harm is often caused to individuals as a result of evacuation, particularly in cases where evacuees are unable to return to their original homes. Evacuees can suffer up to twice the rate of illness of others affected by an emergency but who are not dislocated from their homes and communities[2]. Furthermore, the failure to plan for timely and well managed evacuations can lead to a strong resentment of government which may in turn decrease the ability of emergency management organizations to act effectively in the future[3].

Evacuation plans must also take into consideration a range of risks and specific contexts in which evacuation may become necessary. For example, the amount of advance notice or lead time that can be expected ahead of different types of hazard events affects the possibility, timing and nature of evacuations. Some types of events – such as hurricanes and wild fires – allow for advance warning, pre-emptive evacuations and preparations to shelter evacuees, and the pre-staging of assets that will be needed during and after the event[4]. Others – such as earthquakes and flash floods – arrive with little or no advance notice, often causing a large number of casualties[5], requiring the immediate implementation of response plans[6], and affecting the possibility and nature of subsequent evacuations.

1 IASC (2011).
2 Whiteford & Tobin (2004).
3 New Zealand Ministry of Civil Defence and Emergency Management (2008).
4 J. E. McGovern.
5 Ibid.
6 U.S. Department of Transportation (2006).

Mass evacuations involve a wide range of actors, including emergency management practitioners, civil protection agencies, local disaster preparedness and response workers, disaster-affected and host communities, and public service providers. A comprehensive evacuation plan should, therefore, map out and support the mobilization and coordination of all relevant actors and resources, including through procedures for responsible officials to provide clear direction and regular and reliable information to all affected populations and responders. Diversity among the community to be evacuated needs to be understood and taken into account in both planning and implementing such movements.

1.2 PURPOSE AND SCOPE OF THE MEND GUIDE

The aim of this guide is to serve as a reference providing key background considerations and a template to assist planning bodies at national, regional, municipal, and other levels – both urban and rural – in the development and/or refinement of evacuation plans in accordance with emergency management principles.

Various approaches to evacuations have been taken in different countries around the world. This guide relates to emergencies resulting from natural disasters and incorporates considerations, best practices and guidance from a wide range of different sources, and from a variety of countries, to provide a generic template for creating an evacuation plan. It should be noted, therefore, that the template must be adapted to take into account specific variables important to different contexts.

Variables might include, for example, the potential scale and location of evacuation zones and areas of refuge; shelter options available; access to safe transport; public information and basic services; social, cultural, age and gender-specific needs for protection; the potential duration of evacuees' displacement and evolving needs; processes to facilitate safe and voluntary return or relocation elsewhere; or administrative procedures and budgetary allocations linking evacuation to post-disaster recovery.

This Guide assumes that a disaster risk assessment has been conducted to collect the key information necessary for developing a mass evacuation plan. The need for specific evacuation plans will be identified based on the results of a region's hazards and risk assessments. Such a disaster risk assessment should include the mapping of hazards and response capacities in hazard-exposed areas and areas of refuge, involving communities at risk, potential host communities, and local providers of key services such as schools, hospitals, care homes, prisons, public and private transport providers, hotels and civil society organizations.

In planning for a mass evacuation, emergency responders should bear in mind different patterns of displacement and risk faced by evacuees according to the type of hazards involved and the resources, coping strategies, and specific vulnerabilities or needs of different people. For example, sudden-onset events such as earthquakes or flash floods may cause communities to leave their habitual residences in collective groups, which allow families and

communities to stay together and maintain normal systems of social support and coping mechanisms, and often suggest an intent to return[7]. Conversely, slower-onset hazards that provide additional time to preemptively act, such as hurricanes, may stagger evacuations over time, breaking up communities and individualizing displacement. The geographical scope and severity of a disaster's impact, as well as options available to evacuees of shelter with friends and family, affect: how far people move to find safety and shelter; how long people remain displaced; when and whether return home is a safe and desirable option; or whether resettlement elsewhere will need to be pursued.

Assessments of risk require systematic collection and analysis of data and should consider the dynamic nature of hazards and vulnerabilities that arise from socio-economic conditions and changing environment. Hazard and vulnerability information is central to almost every aspect and every stage of natural disaster risk management[8]. Different hazards and their risks may require different courses of action. In the event that hazard mapping and risk assessments point to the need to develop an evacuation plan, the template below can be used by practitioners as a tool for developing their own plans.

This guide also assumes that evacuation is a measure of last resort: it should not expose people in transit to more danger than if they had sheltered from the danger.

7 IFRC (2005).
8 World Meteorological Organization (2010).

1.3 TERMS AND DEFINITIONS

The definitions provided below have been adapted for the purpose of this Guide from a range of definitions used in the guidelines and policy documents of various governments and agencies. Additional definitions used by different authorities or actors can be found in the endnotes to this section and may be helpful for formulating definitions for other purposes and contexts.

Though the *Guiding Principles on Internal Displacement* offers a universal definition of the term "internally displaced persons", there are currently no internationally agreed upon definitions for key terms such as 'affected', 'evacuee' and 'mass evacuation'. In cases where terms have an internationally agreed upon definition this is indicated below.

Affected Population

People requiring immediate assistance during an emergency, including basic survival needs such as food, water, shelter, sanitation, and immediate medical assistance[9].

> **Note**
>
> In essence these are the people to whom responders direct their assistance inside and outside evacuation areas.

Evacuation

Evacuation is the rapid movement of people away from the immediate threat or impact of a disaster to a safer place of shelter. It is commonly characterized by a short time frame, from hours to weeks, within which emergency procedures need to be enacted in order to save

9 Global Protection Cluster Working Group (2011).

lives and minimize exposure to harm[10].

Evacuations may be:

Mandatory

An evacuation ordered and 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 entail 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[11].

Advised

An official evacuation advisory message may be issued to enable early response and informed decision-making by the population at risk on whether and when to evacuate. An advisory may precede a mandatory order to evacuate as the level of the threat and the risk associated with the alternative of sheltering in place increases. As for mandatory evacuations, authorities are usually seen to have a responsibility to facilitate safe and timely evacuations for those in need of assistance.

Spontaneous

When people evacuate their current location due to actual or perceived risk using their own means (self-evacuation) and without (or before) being officially advised or directed to do so. This may include people who leave areas outside a designated evacuation zone (also known as "shadow" evacuations)[12].

Mass Evacuation

For the purpose of this Guide, mass evacuation implies the evacuation of whole communities, neighborhoods or geographical areas. The scale and complexity of such evacuations creates the potential for emergency response capacity in a given jurisdiction or country

10 Definitions of "evacuation" used by different authorities may include additional details about the evacuation process and other planning assumptions, such as that evacuation is undertaken as a short-term and temporary measure. For example: "The temporary movement of people to a safer location in order to mitigate the effects of an emergency or disaster on a community" (adapted from Emergency Management Australia, 2005); and "The organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas (Cuyahoga County Office of Emergency Management, 2012).
11 Adapted from New Zealand National Civil Defence and Emergency Management, Appendix 2 (2008).
12 Ibid.

to be overwhelmed and the necessity for coordination across one or more jurisdictions to effect the evacuation and sheltering of evacuees[13].

Evacuation Plan

Pre-identified and agreed operating procedures, responsibilities and resources, usually recorded and shared in written form, to facilitate and organize the timely and coordinated actions of all relevant stakeholders in case an emergency evacuation should become necessary. Stakeholders include responsible authorities, other emergency responders, public service providers and people living and working in areas identified as potential evacuation zones and in places of shelter for evacuees.

Evacuee

A person who has evacuated a hazardous location in response to the immediate threat or impact of a disaster, either through their own initiative and resources (self-evacuated) or through the direction and assistance of authorities and/or emergency responders[14].

Early Warning System

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately in order to reduce the possibility of harm or loss.

13 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."

14 Evacuees who remain within their country are considered to be internally displaced people. In line with the Guiding Principles on Internal Displacement, during and after evacuation, evacuees remain entitled to the same rights and guarantees they enjoyed before an evacuation as citizens or habitual residents of the disaster-affected country.

Hazard

A potentially damaging phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage[15].

Natural Hazard

Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage[16].

Risk

The combination of the probability of an event and its negative consequences[17].

Vulnerability

- The characteristics and circumstances of a community, system, or asset that make it susceptible to the damaging effects of a hazard[18].
- The propensity or predisposition to be adversely affected[19].
- The degree to which a socio-economic system is either susceptible or resilient to the impact of natural hazards and related technological and environmental disasters, determined by a combination of several factors including hazard awareness, the condition of human settlements and infrastructure, public policy and administration, and organized abilities in all fields of disaster management.

> ✎ **Note**
>
> Poverty is one of the main causes of vulnerability in most parts of the world.

15 UNISDR (2009).
16 Ibid.
17 Ibid
18 Ibid
19 Intergovernmental Panel on Climate Change (2012).

Disaster

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources[20].

Solutions

A result through which evacuees and other internally displaced persons no longer have specific assistance needs linked to their displacement, and can enjoy their human rights without discrimination due to their displacement. This can be achieved through: 1) sustainable reintegration at the place of origin ("return"), 2) sustainable local integration in areas where evacuees have taken refuge ("local integration"), or 3) sustainable settlement in another part of the country ("relocation")[21].

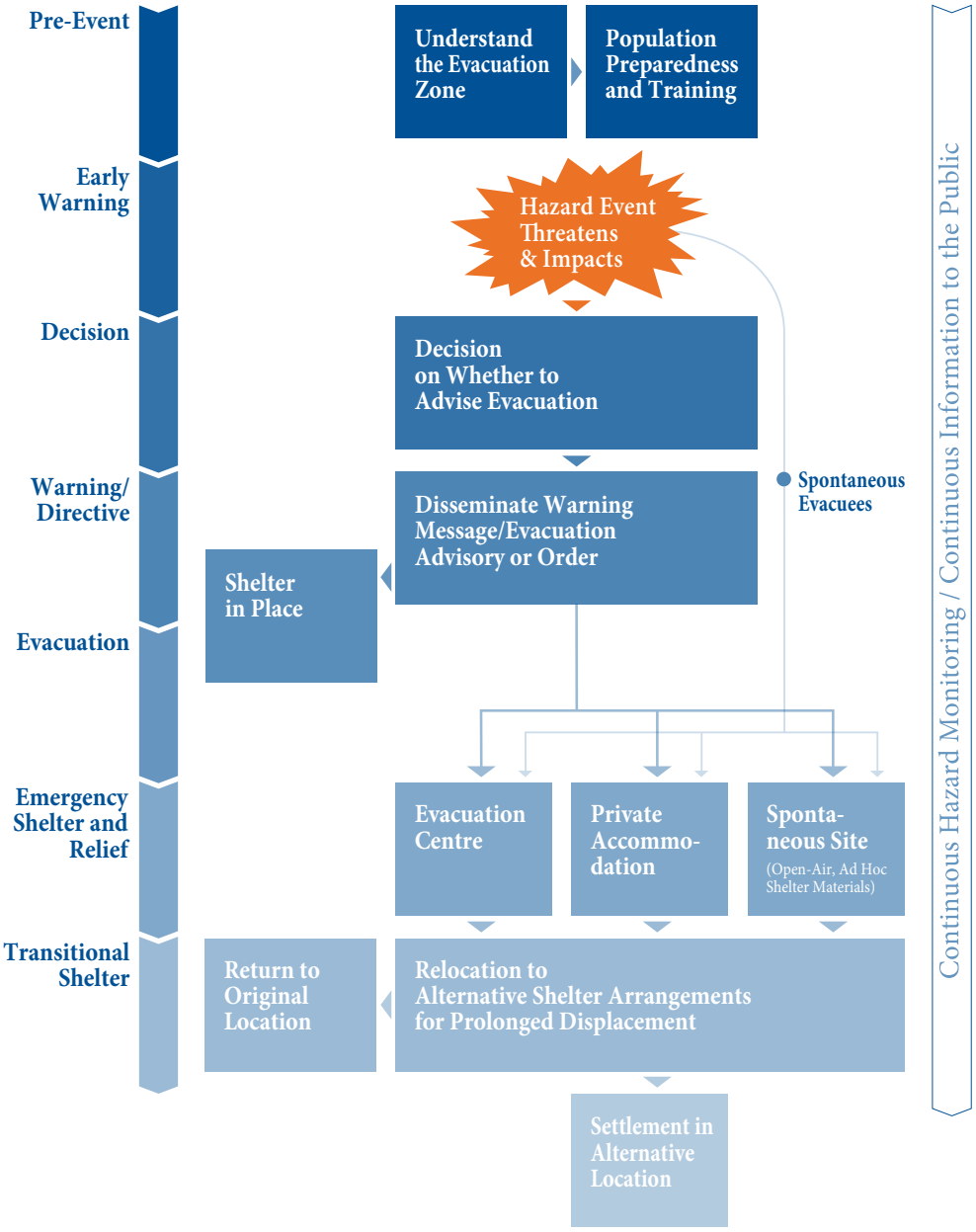
20 UNISDR (2009).
21 Adapted from IASC (2010).

1.4 EVACUATION PHASES

As seen in the Terms and Definitions section of this guide, "evacuation" commonly refers to the act of temporarily moving people away from a dangerous area to one of safety. Evacuation usually refers to quickly developing, acute emergency situations. It is commonly characterized by a short time frame, from hours to weeks, within which procedures need to be enacted in order to save lives and minimize exposure to harm. To effectively prepare for, execute, and conclude such an activity, many phases are involved prior to, during, and after the act of evacuation.

As this guide focuses on providing guidance for evacuation planners in creating an evacuation plan, the following pages are primarily concerned with the decision, warning, evacuation, and emergency shelter and relief phases, which are the stages typically identified for action in an evacuation plan. However, as the pre-threat stage is vital to both planning and implementing an evacuation, and as the nature of an evacuation's execution can greatly influence the success of a quick recovery strategy, the Guide also touches upon the pre-threat and post-evacuation phases.

The diagram below shows the generic evacuation phase sequence for a mass evacuation, including the 'shelter-in-place' option (taking immediate shelter in a readily accessible location) and spontaneous evacuees (evacuees who are not assisted in evacuating through a formal plan but rather initiate their own evacuation activities). All of the phases of this diagram that are applicable to evacuation planning are addressed in the Mass Evacuation Plan Template, and should equally be addressed in any evacuation plan, though elements may be adapted or added according to the context.



Evacuation takes place within a process that begins with preparing for the possible need to evacuate populations at high risk from imminent or actual disaster. It involves ongoing risk monitoring and management as the situation and needs of evacuees evolve over time, and only ends with their safe, voluntary and sustainable reintegration back home or in alternative locations[22].

22 IDMC (2013)

Pre-event/Strengthening Preparedness

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 assured to the maximum extent possible, wherever those persons may be located[23], or through "sheltering in place". Evacuation may become necessary, depending on the situation.

Evacuation begins with preparing for the possible need to evacuate populations at high risk from imminent or actual disaster.

Community-based and government response preparedness measures for evacuation may include:

- Participatory development of community/neighbourhood-based disaster risk assessments and evacuation plans, including information in accessible languages and formats on potential evacuation zones, early warning systems and safe shelter;
- Activating alert systems and preventive protection measures, in particular for persons with special needs for assistance, should evacuation become necessary;
- Ensuring policy, legal and budgetary considerations are addressed, including the need for potential cross-jurisdictional cooperation;
- Planning for transport, communications, shelter, relief and protection requirements of populations in potential evacuation zones, during accommodation in surrounding areas, and to facilitate return or settlement elsewhere;
- Making provision for the protection of property in evacuated areas;
- Developing standard operating procedures for different scenarios;
- Building the capacity of local emergency responders and communities through training and simulation exercises.

23 IASC (2011).

Early Warning/Public Information

Information should be provided to the population regularly and throughout at all phases, from early warning about approaching or developing weather-related hazards (such as hurricanes or rising water levels), to regularly updating evacuees regarding developments in affected areas, the ability or inability to return home, and transitional support services and/or opportunities to relocate or resettle elsewhere.

Decision/Activation of Evacuation Procedures

Once a hazard threatens or impacts an area, the official **decision** to evacuate (or shelter-in-place) is made, which activates evacuation procedures.

Warning/Public Evacuation Advisory Notice or Order

After such a decision has been made, **warning** messages are disseminated to stakeholders, making them aware that the decision to evacuate has been made.

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 Relief

Upon reaching safe locations outside the evacuation zone, evacuees will need access to safe shelter, the means to fulfil other basic needs, and the necessary safeguards against any further risks to their security and well-being. Temporary shelter and assistance may be provided at official evacuation sites or centres, through accommodation with host families or friends, or through other private arrangements.

Plans should consider the possible need for extended periods of shelter support. The expected amount of time before evacuees are able to safely and voluntarily return to their places of origin is dependent on the nature and extent of the disaster and on the resources of the affected and evacuated population to support recovery. Prolonged displacement may require relocation to other transitional shelter before more permanent solutions can be found. Schools and other public buildings used as temporary evacuation centres in the immediate emergency period 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.

Towards Recovery/Return and Reintegration or Relocation and Settlement Elsewhere of Evacuees

Once the situation stabilises and if and when evacuation zones become accessible and safe to return to, evacuees should be assisted to relocate and begin the process of recovery. Alternatively, 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.

Continuous Risk Monitoring and Communication

Throughout all of these phases, it is vital to continuously **monitor** the changing needs, movements and risks to the displaced population as the disaster situation evolves. This includes secondary hazards such as landslides, fire, damaged structures, new periods of heavy rainfall, and secondary impacts on technological and environmental hazards such as nuclear accidents, oil, or chemical spills, as well as the evolving needs and movements of displaced communities.

PRE-PLANNING CONSIDERATIONS

There are issues that require consideration before developing an evacuation plan.

2

2.1 CROSS-CUTTING ISSUES

There are issues that intersect all phases of an evacuation, which should be considered during all phases of planning and execution of the plan.

The Legal Basis of Evacuation Plans

Key Considerations

An evacuation plan should take into account existing domestic and international legislation relevant to evacuations and the protection of and assistance to evacuees.

National, provincial, or local legislation, where it exists, often sets out information on the roles, responsibilities, authority, capacities, and resources of relevant stakeholders to provide a more holistic understanding of the rights and responsibilities of decision-makers and evacuees, what assets are available in a response, and how to employ them.

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, and identifies rights and guarantees relevant to their protection and assistance during displacement as well as during return or resettlement and reintegration. The *Guiding Principles* are consistent with international human rights law and international humanitarian law.

They include:

- In relation to protection from displacement:
  - The prohibition of arbitrary displacement, including displacement in cases of disasters, unless the safety and health of those affected requires their evacuation (Principle 6.2);
  - That measures shall be taken by authorities to minimize displacement and its adverse effects (Principle 7.1);
  - That authorities undertaking such displacement shall ensure, to the greatest practicable extent, that proper accommodation is provided to the displaced persons, that such displacements are effected in satisfactory conditions of safety, nutrition, health and hygiene, and that family separation is avoided (Principle 7.2);
  - Displacement shall last no longer than required by the circumstances (Principle 6.3).
- In relation to protection during displacement:
  - That internally displaced persons have the right to seek safety in another part of the country and to be protected against forcible return to or resettlement in any place where their life, safety, liberty and/or health would be at risk. (Principle 15a and 15d);
  - That property and possessions left behind by internally displaced persons should be protected against destruction and arbitrary and illegal appropriation, occupation or use (Principle 21.3);
  - That authorities facilitate the replacement of documents necessary for the enjoyment of their legal rights and lost in the course of displacement (e.g. personal identification documents, birth and marriage certificates), without imposing unreasonable conditions, such as requiring the return to one's area of habitual residence in order to obtain these or other required documents;
  - Tracing and family reunification.

- In relation to return, resettlement and reintegration

  - Competent authorities have the primary duty and responsibility to establish conditions, as well as provide means, which allow internally displaced persons to return voluntarily, in safety and with dignity, to their homes or places of habitual residence, or to resettle voluntarily in another part of the country. Such authorities shall endeavor to facilitate the reintegration or return or relocation of internally displaced persons, including their full participation in the planning and management of these processes. (Principle 28).

In complement to this, the IASC *Operational Guidelines on the Protection of Persons in Situations of Natural Disasters* provide the following guidance in relation to evacuations:

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: (a) is provided for by law; (b) 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; (c) is, to the extent possible, carried out after the persons concerned have been informed and consulted[24].

24 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 (ordre public), public health or morals or the rights and freedoms of others, and are consistent with the other rights recognized in the present Covenant.

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.

Voluntary (discretionary) and enforced evacuation

The difference between voluntary (discretionary) evacuations and enforced evacuations (where people ordered to evacuate refuse to do so and are moved against their will) can be a sensitive legal issue, and it is important to understand the relationship of both to existing laws. When people resist official orders or refuse to leave their homes, and where efforts to encourage compliance with the evacuation order have proven ineffective, authorities may consider whether people should be forcibly evacuated against their will as a last resort.

Forcible evacuation is not considered arbitrary or unlawful and is, therefore, permissible if it is done in accordance with the law, is proportional or absolutely necessary under the circumstances to protect life, health or the physical integrity of the people affected or at risk, and, to the extent the emergency allows, is carried out following proper consultation with the affected population beforehand[25].

At the same time, enforcing an evacuation order is a difficult decision. It must be considered alongside its effect on the right to freedom of movement and residence and the right to privacy and home, as well as practical issues around the availability of resources and authorities' abilities to enforce evacuation orders, noting that responders should not be put in situations of extreme risk.

25 IASC (2011).

It is essential to consider the following when contemplating the enforcement of an evacuation order:

a. Does it have a legal basis?

If an evacuation is undertaken without the necessary legal basis, it is unlawful and therefore arbitrary, constituting a violation of freedom of movement. In emergency situations and in the absence of a legislative act, such legal basis may take the form of a decree issued by the executive power, in cases where the law provides for this.

b. Does it serve a legitimate aim?

Evacuation is absolutely necessary under the circumstances to respond to a serious and imminent threat to life, physical integrity or health.

c. Is it proportional?

All reasonable, less intrusive measures have been considered or tried within the time allowed by the circumstances but are insufficient to avert the threat and protect the lives or physical integrity and health of the persons concerned. Forced evacuation must be considered as a last resort, as it constitutes a serious and direct infringement of the right to freedom of movement.

d. To the extent possible, is it carried out after the persons concerned have been informed and consulted?

Including participation in the identification of suitable alternatives, evacuation routes, and measures that are to be taken to safeguard their property (both left behind and brought along with them) and family integrity. In rapid-onset but predictable situations, where consultation time is very limited, the onus is clearly on participatory preparedness and contingency planning with communities at risk and the implementation of effective early warning measures.

e. Is it carried out in a manner consistent with other human rights?

Have the people concerned been:

- Kept informed throughout the evacuation process and during their evacuation including about the site, duration and related developments, and with information provided in a manner that is accessible to them and in a language that they understand;
- Protected from discrimination during the evacuation and in the place of evacuation;

- Evacuated in a manner and to a place that is safe, and that allows for living conditions that respect their dignity and safety, and that do not put them at further risk- including attention to persons with specific needs and vulnerabilities?

Additional legal considerations

Additional legal questions to consider include:

- Concluding pre-agreements with potential evacuation sites, such as places of worship and schools;

- The use of private land: How will such land be pre-identified, and how will landowners be compensated? Preparation in terms of legal arrangements for handling land issues in an emergency can help avoid complications that can worsen a crisis;

- Custodial care for unaccompanied minors, family tracing (please also see *Protection*);

- The allocation of costs: It is important to identify potential costs (such as for shelter, transportation, etc.) and the institutions which will bear them prior to an emergency, in order to ensure efficient coordination and the availability of necessary resources. For slow-onset events, establishing the potential costs of initiating an evacuation beforehand may also be used as a preliminary budget for proposals seeking assistance from national or international donors;

- Cross-border agreements:

    - As disasters can straddle international borders, neighbouring States may have agreements in place to assist foreign national communities on the other side of the border. Such agreements may occur at the national level but affect local communities in close proximity to the border. It is vital that local authorities identify and are aware of any such agreements that may affect local evacuation plans;

    - The same consideration may also be relevant between different municipalities or districts within a single country. It is important to consider what agreements may exist between different domestic jurisdictions as well.

- Regulations regarding the collection and sharing of personal data to inform evacuation and accommodation plans;

- The rights of evacuees under existing legislation: what laws either support or deny mandatory evacuation activities? Does any local or national legislation exist regulating the type and minimum levels of assistance that evacuees are entitled to?

Roles and Responsibilities

Key Considerations

Evacuation is a complex process requiring the involvement of multiple organizations and actors working in coordination toward a common goal. As in any complicated coordination structure, it is vital for all relevant parties to understand their roles and responsibilities within the broader response framework in order to ensure efficient and effective evacuations. To this end, when developing an evacuation plan, it is essential to:

- Identify all stakeholders and their roles in an evacuation, such as the agencies and actors responsible for the public safety and security of evacuation centres, health providers, shelter set-up, etc.;

- Additional critical infrastructure evacuation plans are often created for institutions or areas with specialized evacuation needs. Typically, hospitals are responsible for evacuating patients, schools are responsible for evacuating children when a disaster occurs during regular school hours, and prisons are responsible for evacuating prisoners. It is vital for such critical infrastructure evacuation plans to fit into broader evacuation frameworks to ensure evacuees are moved in good time and to appropriate safe zones;

- Identify decision-makers at all phases of a mass evacuation and define the decision-making process. 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 of an emergency, and who conducts an assessment of the return zones?

- Identify capabilities for around-the-clock response during an emergency, such as a 24-hour/7-days-a-week emergency centre. Who will be responsible for providing and monitoring such continual response capacities?

- Clarify the role of different kinds of actors.
  - Governments are the duty-bearers to protect populations at risk;
  - The role of national and local civil society, including community-based organizations, is critical – both in facilitating evacuations and providing temporary shelter to evacuees. In the majority of cases, friends, families and local community-based and faith-based organizations are the first port of call for evacuees seeking temporary refuge;
  - The media plays a very important and relevant role in all phases of an evacuation. They can constitute one of the main sources of information for the population. Working with the media is therefore crucial before a disaster occurs to ensure they are aware of the response systems in place and what an evacuation entails, including its triggers. It is important to have agreements with the media to ensure they will publicize the warnings being issued and that the prepared messages are given precedence over other news or programmes;
  - Other potential contributors to a mass evacuation may include the private sector.

In Italy, civil protection structures at central, regional, provincial and municipal level are planned to co-ordinate their operations and resources with non-governmental actors through a top-down, bottom-up organizational system that strategically integrates capabilities at short notice and in real time. The National Civil Protection Service provides a legally recognized institutional form to these different actors, with its mandate to protect human life, health, economic assets, cultural heritage, human settlements and the environment from any kind of disasters, either natural or man-made. In the case of the most severe types of national emergencies, the Head of Department of Civil Protection (DCP) convenes the Civil Protection Operational Committee, which defines intervention strategies, guarantees a coordinated deployment of national resources, and a unified direction and coordination of all emergency activities.

At 03:32 on 6 April 2009, a devastating earthquake hit L'Aquila and several other municipalities of 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. The event caused the deaths of 308 people and injured more than 1,500. Much damage to both public and private infrastructures was reported, as well as significant losses to the area's rich cultural heritage. A few hours after the earthquake, 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 many people were displaced. In total, approximately 67,000 displaced people were hosted in shelter areas provided by the National System of Civil Protection, and in public and private buildings identified in the surroundings.The following table summarizes relevant emergency statistics.

	The first 48 hours (8/04/2009)	**Maximum level reached**	**January 31th 2010**
Assisted Population	27,772 (17.772 in shelter areas)	67,459 (35.690 in shelter areas)	10,028 (0 in shelter areas)
Displacement Camps	30	171	0
Tents	2,962	5,957	0
Field Kitchens	24	107	0
AMP – Health Care	13	47	0

Table 1 The earthquake in Abruzzo: Statistics of the Emergency

	The first 48 hours	Maximum level reached	January 31th 2010
Fire Brigades	2,400	2,471	422
Army	1,825	1,825	345
Police Forces	1,586	3,487	683
International Red Cross	816	835	66
Volunteers	4,300	9,000	23
Total	**10,927**	**17,618**	**1,539**

Table 2 The reaction of the Italian Civil Protection System: The Forces Deployed

The key lessons arising from the experience of the emergency management of L'Aquila earthquake are as follows:

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 in order to clarify the general procedures at the various 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.

5. The criteria followed for the set-up of 171 shelter areas was based upon the principle of proximity (to areas of origin) in order to avoid moving people far away. On the other hand, such a geographically-distributed shelter system was difficult to manage. Furthermore, is important that the quality of the facilities provided in shelter areas be standardized.

6. A prompt activation of the national Operational Committee in order 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. On the basis of the principle of proximity, public services (such as schools, banks, pharmacies, etc.) were provided inside the shelter areas. It is important to underline that 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 in order to disseminate the information and to collect the requests of the population.

10. Another key element is the necessity of establishing common spaces to be used for organizing public assemblies of the population inside shelter areas. In order to have an active civil society in the long-term reconstruction phase, it is essential to adopt measures useful for rebuilding social structures[26].

26 Italian Department of Civil Protection (2013)

Protection

2

Key Considerations

Emergency management is often within the remit of a country's and/or local authority's Disaster Management Agency, which is tasked with planning and implementing response mechanisms during an emergency, as well as ensuring the overall protection of affected populations. 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 post-disaster chaos. Certain groups are considered particularly vulnerable to such violations. Vulnerable persons are entitled to special consideration and assistance from authorities, including during acute emergency evacuations and return processes. Vulnerable groups that may require special consideration could include: the aged and infirm, women, children (particularly when unaccompanied), persons with disabilities, minority groups (for example, ethnic, racial and indigenous), prisoners, remote/isolated communities, school groups, tourists and other third-country nationals who potentially require translation services and may include those without proper documentation. It is important to take each vulnerable group's particular protection needs into consideration when developing evacuation plans.

Examples of considerations to take into account for specific vulnerable groups include:

- Women and girls have particular requirements related to reproductive health, primary caregiver roles and protection from violence, exploitation and abuse, especially when norms of privacy and dignity are severely disrupted in mass evacuations and in collective emergency shelters;

- Children without parents or separated from their parents or primary caregivers are also particularly vulnerable, including to trafficking and sexual exploitation and abuse, during evacuations and while living in emergency shelters;

- Persons with disabilities and older persons are often at heightened risk when specific needs are overlooked or not prioritized during mass evacuations. This is especially the case 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, and are less able to find food, shelter and critical 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 emergency shelter and housing. At the same time, older persons and persons with disabilities can make a positive contribution in coping with emergencies and may also be called upon to assume primary caregiving roles;

- Members of LGBTI communities;
- Socially excluded or disadvantaged communities;
- Family separation.

Synergy across levels: community, local, regional, national and global (when applicable)

2

Key Considerations

As "mass evacuation" is defined in part by a disaster's ability to overwhelm response capabilities and resources – responses to such disasters frequently require the use of capacities from other areas or levels of response. While it is important to have contextualized evacuation plans at national, regional, and local levels, it is equally important to understand how such plans fit into existing legal and operational frameworks at other levels. The more that evacuation plans account for these frameworks, which identify what additional resources are available and how such response capabilities can be accessed, the more efficiently such capabilities can be incorporated into an actual emergency response. In addition, critical infrastructure evacuation plans such as for hospitals, schools, and prisons, where the management of such institutions typically bear the responsibility for evacuating those in their care, should fit into broader evacuation frameworks to ensure effective and efficient evacuation to appropriate safe zones.

In Nepal, the Ministry of Home Affairs established a National Emergency Operation Centre, which coordinates various disaster responses and is supported by regional, district, and municipal emergency operation centers. A recently approved National Disaster Response Force has identified key priority areas for enhanced preparedness, including the installation of an early warning system; rubble management; maintaining a database of experts; availability of ambulances and other life-saving services; tracking of the affected population and Memoranda of Understanding with neighbouring countries for humanitarian assistance. A Disaster Preparedness and Response Plan has been prepared for each of the 75 districts in Nepal[27].

27 Ministry of Home Affairs, Nepal (2013)

Public information management and Early Warning Systems (EWS)

Key Considerations

Wherever necessary, and if possible, evacuations might be undertaken as a pre-emptive measure in response to early warning, before a situation of increasing risk becomes critical or has developed into a disaster in which the ability of populations to move quickly and safely is already compromised. Beyond the initial trigger event, disasters are highly dynamic situations that also require close, continuous monitoring. According to UNIDSR, an Early Warning System encompasses the range of factors necessary to achieve effective responses to warnings. A people-centered early warning system necessarily comprises four key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received. The expression "end-to-end warning system" is also used to emphasize that warning systems need to span all steps from hazard detection through to community response.

A comprehensive EWS should ideally be in place before a plan is developed, as it is crucial to a number of elements of the evacuation process. It is also important to define in advance who is responsible for triggering a public alert or warning, and at what point such a warning becomes necessary. What kind of data or indicators will signal the need to initiate a public warning? What technical agencies will be responsible for translating data into publicly understood messages? What role will the media play in disseminating information, and how will official public information messages complement media coverage in a way that avoids rumors and speculation? It is important to have an operational, around-the-clock centre capable of translating scientific data and transmitting practical information to the public. Public information management is a continuous task throughout the course of an evacuation, as the population will need to be kept informed of developments as they occur. One major source of public information is the posting of signs to notify communities of existing hazards in an area, or guiding evacuees to safe zones, which can be particularly important to self-evacuees. Further to this, information collected from members of the affected community can also be used to inform the actions of decision-makers and other actors working in disaster response. The population must also be aware of what self-protective measures they

should adopt once the early warning system is triggered. For example, if sirens are triggered to alert for a possible tsunami, it is essential that the population know what to do and where to go once they hear the sirens. Early warning systems and public information work hand in hand.

Local and community participation in evacuation planning

Key Considerations

It has been argued that the success of an evacuation is significantly enhanced when people and communities participate in evacuation planning. According to this argument, communities are less likely to resist evacuation orders when there is increased participation in evacuation planning because they will have had a say in how the evacuations should be conducted. Communities may be able to identify solutions and resources not immediately evident to the authorities or traditional disaster responders. In particular, in order to effectively meet the needs of particular groups within the population, it is important to communicate with each of these groups to understand their situation, their concerns, and other transportation and evacuation issues. This information should then be used to devise evacuation plans that, whenever possible, effectively reflect the different needs within the population. In addition, engaging populations strengthens evacuation planning by making use of local capabilities. Survivors of a disaster, who often serve as the first responders, play a critical role in a post-disaster evacuation. A well-prepared community can further reduce casualties. For example, in the 2004 Indian Ocean tsunami the approximately 80,500 individuals of the Simeulue community in Indonesia, recognizing the unusual behaviour of the sea, fled to the nearby hills before the disaster struck. Subsequently, only 7 people died, in comparison to the 163,795 casualties experienced elsewhere in Indonesia's northern Aceh province. By working with populations to identify and organize their own response capacities, evacuation planners can considerably enhance the overall response to a disaster.

The USA's 'whole community approach' has proven successful in ensuring participation and strengthening resilience to natural disasters. The idea behind this approach is that emergency management can collectively achieve better outcomes in times of crisis by focusing on core elements of successful, connected, and committed communities. The three core principles of the whole community approach are: understanding and meeting the actual needs of the whole community; engaging and empowering all parts of the community; and strengthening what works well in communities on a daily basis. Empowering local action means allowing members of the communities to lead – not follow – in identifying priorities, organizing support, implementing programmes, and evaluating outcomes.

For example, following the devastating tornadoes in Alabama in 2011, various agencies, organizations, and volunteers united to locate recovery resources in the community and communicate information about these to the public. These organizations established the Alabama Interagency Emergency Response Coordination Committee, which included volunteers as well as representatives from agencies such as the Federal Management Emergency Agency (FEMA) and the American Red Cross. Conference calls were held daily to coordinate, determine needs, and exchange information. Recovery resource information was compiled in an extensive database, which was updated twice daily.

Ohio offers another example of community participation based on the whole community approach. Ohio State is home to the country's second-largest Somali population, so special efforts were made to determine the communication methods preferred by this community. This resulted in the involvement of Somali community leaders in emergency preparedness and response efforts, as they are considered the foremost sources of trustworthy communication[28].

28 U.S. Federal Emergency Management Agency (2011).

Trainings, drills, and simulations

Key Considerations

Evacuation plans, irrespective of their type, are only useful if they are known and exercised by as many people involved as possible. In addition, validation of emergency plans through training and exercises can reveal weaknesses and gaps, thereby allowing for revision and improvement in advance of the actual implementation of a plan. Mitigating the impact of a disaster, particularly in terms of loss of life, relies in part on the ability of designated responders to act, as well as that of individuals in affected communities. Effective performance during an emergency is shaped by the basic level of training received by various actors, making it critical to conduct drills and trainings for both responders and communities to reinforce the best course of action in different potential disasters. Such exercises may, of course, vary depending on the roles of different actors, with simulations perhaps being most useful for responders to put into practice conceptual techniques, while communities may benefit from public awareness programmes communicating potential evacuation routes and zones prior to an event. It is well known that, in most cases immediately after a disaster occurs, the affected population is the first to respond. A well-trained and prepared population can help save lives and be very useful during evacuations.

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 of the nearly 3,000 elementary and junior high school students of the city of Kamaishi survived this event. Immediately after the earthquake struck that afternoon, the students ran out of the school to higher ground, prompting other school children and many local residents to do the same. Older students supported younger ones, and together they reached a safe location while behind them the tsunami swept away their schools and the town.

The students' prompt response to the urgent situation was the result of a tsunami disaster prevention education programme that Kamaishi schools had been working on over the past 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 various 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[29].

29 Adapted from Government of Japan, Public Relations Office.

Effects of climate change on pre-planning

Key Considerations

Climate change is expected to increase the frequency and severity of natural hazards such as floods and storms[30]. As such, many nations are likely to face new, more frequent or more severe hazards. In this context, pre-planning presents a particular challenge, as the scope of evacuation plans cannot rely on historic experience alone to predict the magnitude of future events. In order to develop practical and comprehensive evacuation plans, it is important to broaden planning assumptions by considering the most extreme conditions and impacts possible for each hazard, not merely the scope of previous disasters. In addition, developing evacuation plans that can be adapted to the scale and severity of a disaster is vital to enhancing overall response capacity.

30 IDMC (2012, p. 13).

2.2 UNDERSTANDING THE EVACUATION ZONE

Before a response plan can be developed, several steps must be undertaken in order to obtain information essential to the planning process. These include:

a. Community analysis, and identification and profiling of potential evacuees. Understanding the demographics of a community is important for deciding potential courses of action during an evacuation. It also helps with analyzing the potential effects of an evacuation on the community. Such analyses, which can use resources such as recent censuses, help to identify areas or communities of special concern or requiring additional consideration in response, such as:

- Densely settled communities;
- Tourist zones and areas occupied or frequented by third-country nationals (potentially requiring public information systems available in multiple languages);
- Areas with limited access;
- Persons with limited mobility such as children, hospital or in-home care patients, and prisoners;
- Earlier displaced communities such as refugees, internally displaced persons or communities recovering from an earlier disaster.

b. Risk assessments and mapping exercises detailing the specific risks and the potential level of severity for hazards in each area of concern. A risk assessment is a methodology used to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend[31]. Risk assessments (and associated risk mapping) include: a reviewing of a hazard's location, intensity, frequency and probability; analyzing exposure and vulnerability including physical, social, health, economic and environmental considerations; and evaluating existing capacities to cope with likely scenarios[32];

c. Evacuation analyses assessing the size of the affected population and its capability to transport itself. Evacuation analyses help identify modes of transportation to be used in the evacuation and potential evacuation routes;

31 UNISDR (2009) .
32 Ibid.

d. 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 in order 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) – the time taken for people to accept that 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;
   - Potential differences in timing based on conditions, such as evacuations at night versus during the day, or sudden- versus slower-onset events (such as between an earthquake and a typhoon).

e. Identification of the role of community-based organizations/NGOs, private agencies and other actors within the given evacuation zone.

f. Inventory of personnel, equipment, and hospital and medical services for treatment of injured persons.

g. Identification of safe transit points and refuge zones.

h. Security concerns or conflict which may affect evacuation.

i. Establishment of critical infrastructure evacuation plans for hospitals, schools, prisons, etc. Such plans are typically created for populations with specialized evacuation needs, and are the responsibility of those in charge of caring for such individuals. It is important to identify and communicate how such plans fit into the broader evacuation framework. It is also important to communicate with similar populations that may receive care privately, such as in-home child or medical care, in order to ensure caregivers are aware of how to meet the specialized needs of those in their care during an evacuation.

j. Disasters do not heed state borders. It is important to be aware that in border regions some communities may choose to evacuate themselves across the border into a neighbouring country. As a result, foreign nationals or refugees may be among the evacuated population. In some cases national governments may have cross-border agreements in

place to respond to disasters and assist the evacuation process. For these reasons it is important to understand how the flow of people across a border (in either direction) can affect the number and nature of evacuees seeking assistance.

Key Considerations

Resource deficiencies

Evacuation plans must be designed around existing and available resources and infrastructure. During the planning process, it is possible that some resources will be identified as lacking. In this case, the planning team should explore arrangements for gaining access to additional resources from outside the region.

In Haiti, major environmental risks are posed by flooding along rivers and canals. Because they have experienced serious flooding and cyclones in the past decade, local communities are familiar with rivers that tend to force evacuations, and respond by moving away in time. However, rapid urbanization and Haiti's geography have led people to settle on or near alluvial fans. These are geographic features which can cause rivers to change course spontaneously during flooding. They are hard to predict without significant scientific research. Mass deforestation and environmental degradation have led to very serious floods and soil movements even after relatively light rains. Urban areas situated near drainage canals are also at risk, as canals can overflow and contaminate flood waters. Recognizing that there is often insufficient information to better understand these high risk areas, and that there is a lack of resources to conduct scientific research, in Port-au-Prince an evacuation plan was developed in consultation with the local population. Since the zones change and cannot easily be predicted IOM inventoried and mapped areas which the local population and authorities considered at risk. This demonstrates that relying on the knowledge and experience of the local community is effective[33].

33 IOM Haiti (2013).

THE MASS EVACUATION PLAN TEMPLATE

3

This part of the MEND Guide presents a template that has been created to assist emergency planners in preparing an Evacuation Plan. A clean template is provided first, and then the next section works through its content, pointing out the main issues for inclusion and consideration while planning.

As the MEND Guide intends to serve different realities, a broad spectrum of relevant issues are presented, and planners should then select those appropriate to their context and level of planning – be it national, regional or local. This template can also be seen as a checklist to assist planners in confirming that all relevant considerations have been addressed in their own plans.

3.1 INTRODUCTION

Purpose

Scope

Relevant legislation

Policies

Evacuation Coordination and Management Structure

Interaction with Other Planning and Land Management Instruments

Planning Assumptions

Review and Revision of Plans

3.1.1 PRE-RESPONSE

Hazard monitoring

Information exchange

Prepare the population to evacuate

Pre-identification of suitable shelter to be used in evacuations

3.1.2 DECISION TO EVACUATE

Authority and criteria to activate the plan

Timing an evacuation

3.1.3 WARNING

Transforming EWS data into public warnings

3.1.4 EVACUATION

Security in evacuated zones

Transport and traffic control

3.1.5 EMERGENCY SHELTER AND RELIEF

Providing shelter

Information management at the evacuation centre

Safety and security in the evacuation centre

Protection at the evacuation centre

3.1.6 TOWARD SOLUTIONS

Return and alternative solutions

3.2 RESPONSIBILITIES

3.2.1 PRE-RESPONSE

Coordinating Agency	Functions

Cooperating Entity	Functions

3.2.2 DECISION TO EVACUATE

Coordinating Agency	Functions

Cooperating Entity	Functions

3.2.3 WARNING

Coordinating Agency	Functions

Cooperating Entity	Functions

3.2.4 EVACUATION

Coordinating Agency	Functions

Cooperating Entity	Functions

3.2.5 EMERGENCY SHELTER AND RELIEF

Coordinating Agency	Functions

Cooperating Entity	Functions

3.2.6 RECOVERY THROUGH RETURN, INTEGRATION OR RELOCATION

Coordinating Agency	Functions

Cooperating Entity	Functions

ANNOTATED TEMPLATE FOR A MASS EVACUATION PLAN

4

4.1 INTRODUCTION

Purpose

In this section, outline the purpose of the plan, its geographical application, the nature of the hazards it covers and what it is seeking to achieve.

Scope

In this section, establish the scope and objectives of the plan. This will vary depending on the context, but may include elements such as:

- Determines legal or other authority to evacuate;
- Establishes a 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;
- Provides for the exercise of developed plans;
- Assures movement capability.

Relevant legislation

This section should reference the most relevant legal provisions within domestic and international law applicable to the evacuation process.

Policies

All relevant national and local policies applicable to the evacuation process should be referenced here.

Evacuation coordination and management structure

This section should establish the structures and mechanisms through which an evacuation will be managed, and the activities of all stakeholders involved to ensure coordination.

Interaction with other planning and land management instruments

This section should reference existing frameworks at other levels and/or in other locations, as well as determine how the mass evacuation plan fits into these existing frameworks. This is important for establishing what additional capacities and resources may be accessed, and how such assistance can be effectively and efficiently accessed and coordinated in an emergency.

Planning assumptions

This section should outline all of the underlying assumptions that provide the foundation of the evacuation plan. Examples of these could be:

- Evacuation support is coordinated between national, regional, tribal, or local government;
- Due to secondary risks, evacuation is a solution of last resort. Segmented evacuation is much more likely than mass evacuation. Sheltering in place will be the most appropriate protective action for many incident 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;

- It is likely that a significant portion of residences will be uninhabitable, preventing some members of the community from returning. Plans for their temporary or long-term relocation are important;
- Members of the population requiring additional support or assistance.

Review and revision of plans

This section should detail the process for the review and revision of the evacuation plan.

Key Considerations

No emergency and/or evacuation plan will remain valid forever, and it will always be advisable to provide for its review and revision at regular intervals. Changes may become necessary as a result of:

a. Progress in scientific knowledge which may lead to a redefinition of the hazard zones. As an evacuation plan is linked to the risk assessment it should also be revised when a revision of the risk assessment for the country or region is undertaken;
b. Changes in the pattern of settlement, road system, communication networks and other technical infrastructure, which will modify the procedures for warning and evacuation in emergencies;
c. Changes in the administrative structure of the national, regional, or local government;
d. After each disaster, in light of the practical experience gained;
e. Exercises and revision.

4.1.1 PRE-RESPONSE

Hazard monitoring

This section should refer to early warning systems that deal with the monitoring, analysis and forecasting of hazards, as well as to ongoing monitoring systems tracking secondary hazards and Internally Displaced Persons (IDP) movements in order to continually inform assistance as needs evolve. It should also identify the data thresholds that will indicate the need to order an evacuation. It is important to link such indicators with issues of timing, as described in the Timing an Evacuation section, below. The Hazard Monitoring section should also identify decision-makers who have the authority to issue a warning or evacuation order to the public. This part of the Early Warning System mechanism is one of the main sources of information influencing a decision to evacuate. The subsequent dissemination and communication of this information to the public in the form of an evacuation warning forms part of the initial actions of the response (See below).

India's response to cyclone Phailin in 2013 highlighted the fact that being prepared and monitoring hazards saves lives. The cyclone, despite being similar in size, speed, and force to cyclone Paradip in 1999, claimed far fewer lives. Whereas nearly 10,000 people were killed by Paradip, less than 50 deaths were reported in the aftermath of cyclone Phailin. When meteorologists reported that the cyclone was heading towards the east coast of India, communities and authorities took immediate action. Emergency response teams and supplies were moved into position, fishermen brought their boats to shore, farmers harvested their crops, and the armed services and various levels of government were put on standby. The evacuation of approximately one million people from the coast to safe areas has been credited with saving many lives. The success of the evacuation operation was possible due to vast improvements in the country's physical infrastructure and communication systems. These ensured that nearly everybody was aware of the approaching danger and could react accordingly. Long-term collaborative efforts by the Indian 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 when emergency struck[34].

Information exchange

This section should establish the ways in which information is transferred from information-producing organizations to decision-makers. It should account for the coordination mechanisms and exchange of information from data-producing agencies running early warning systems, for example water authorities and national meteorological institutes, and Disaster Management Agencies and decision-makers.

In Italy, universities, public research institutes and centres, and public administration bodies collaborate with the Italian Civil Protection Department through different forms of cooperation, agreements, understanding and working teams, in order to define both prevention and forecasting measures for different types of risks. For the fulfillment of the operational responsibilities of the Italian Civil Protection System, technical, scientific and industrial structures are involved with the aim of ensuring the necessary technical-scientific support.

To fulfill its task of identifying the types of events, their geographical distribution and the probability of occurrence and risks, the Italian Civil Protection Department has established the "Commissione Grandi Rischi", the Major Risk Commission, a scientific consultant body which is focused on risk assessment. This Commission uses a multi-hazard approach and deals with four phases of the emergency management cycle: forecasting, monitoring, surveillance and risk prevention of both natural and technological disasters. The Commission is divided into different sectors, depending on the risk typology.

34 Poulter & McDiarmid (2013); Vyawahare et al. (2013)

Regarding the Vesuvio National Emergency plan, the scientific community is essentially represented by two major bodies:

a. Major Risk Commission

Volcanic risk section: as outlined above, this is the connecting structure between the National Service of Civil Protection and the scientific community. It carries out technical-scientific analysis and consultancy with regard to predicting and preventing various risk situations.

b. Vesuvius Observatory

Founded in 1841 by Ferdinando II di Borbone, King of "Due Sicilie", the Vesuvius Observatory is the oldest volcanology observatory in the world. It is now situated in the Naples branch of the National Institute of Geophysics and Volcanology (INGV). The Vesuvius Observatory is responsible for monitoring active volcanoes such as Vesuvius, Campi Flegrei and Ischia.

The scientific community is involved in the Vesuvio National Emergency plan with the aim of defining the event scenario and establishing the alert levels.

A specific Commission composed by national scientific experts was established in 2003. The result of the works presented by the Commission was an event scenario for the National Emergency plan. On the basis of this document, three different areas of danger were defined:

- **Red Zone**

  The red zone is the area immediately surrounding the volcano, and is in greater danger as potentially subject to pyroclastic flows or building collapse caused by the ash deposit. The National Emergency Plan establishes that the red area is completely evacuated before the eruption.

- **Yellow Zone**

  The yellow zone corresponds to the entire area that could be affected by the fallout of pyroclastic particles - ash and lapilli. The fallout of particles may cause building collapse and respiratory problems (especially in vulnerable people who are not adequately protected), damages to crops and problems to air, rail and road transportation.

- **Blue Zone**

  The Blue Zone is located within the yellow zone, but is subject to further danger. It corresponds to the "valley of Acerra - Nola" which, for its hydrogeological characteristics, may be subject to floods as well as the fallout of ash and lapilli.

The Commission also defines the alert levels that represent different phases of the activities of the Volcano.

In particular, the definition of alert levels is based on information collected by the scientific community on the activity of Vesuvio in recent decades. The plan, in its current version, provides 4 levels of alert, identified by the combination of precursory phenomena of different types:

- **Basic alert level**

  A state of activity characterized by the absence of ground deformation, low seismicity, lack of significant changes in the gravity field, constant values of temperature and composition of fumarolic gases.

- **Attention alert level**

  Upon the occurrence of significant changes in physical and chemical parameters of the volcano, Vesuvius Observatory is expected to monitor, evaluate and inform the Civil Protection Department, which will consult the experts of the National Commission for forecasting and preventing great risks. The Commission evaluates the data and, if necessary, establishes the eventual transition to the attention alert level. The variations observed at this stage, however, are not necessarily indicative of the approach of an eruption, and they could easily return to normal activity.

- **Warning alert level**

  If there is another variation of controlled parameters, it would be necessary to pass to the stage of early warning. The transition to the warning level is declared by the national Major Risk Commission.

- **Alarm level**

  If the phenomena increase, it would be necessary to pass to the stage of alarm. This means that experts consider an eruption almost certain, which could occur over several weeks. Also in this case the transition to the alarm level is declared by the National Commission for the prediction and prevention of major risks.

The Vesuvio National Emergency plan established five operational stages, in which the various structures of Civil Protection and the population of the area at risk are progressively involved. These operational stages correspond to the different alert levels. Once the scientific community establishes to pass to another stage of the alert level, the Civil protection decision-maker will declare the change to the correspondent operative phase, which implies specific measures to be taken by civil protection actors, as shown in the following decision matrix:

State of the Volcano	Eruption Probability	Time to the Eruption	Scientific Community	Emergency Response
alert level: **BASE**				
No significant variation of monitored parameters	Very low	Undefined, not less than several months	Surveillance activity according to schedule.	• Ordinary activity
alert level: **ATTENTION**				**PHASE I**
Significant variation of monitored parameters	Low	Undefined, not less than some months	Technical and scientific alert, and improvement in the monitoring system.	• C.C.S.- Napoli activation • Information to people • Autority communications
alert level: **WARNING**				**PHASE II**
Further variation of monitored parameters	Medium	Undefined, not less than some weeks	Continuance of the surveillance activity; simulation of the expected eruption phenomena.	• Request for emergency staus declaration to the President of Minister Council • Operational Commitee for Civil Protection meeting • DPC on site activations • CCS activation in the host Italian Regions • Relief teams allocation
alert level: **ALARM**				**PHASE III**
Appearance of phenomena and/or evolution of parameters suggesting a pre-eruption dynamic	High	From weeks to days	Surveillance through remote system.	• Red zone evacuation • Relief teams leave the red zone going to the yellow zone • Preparation of gates for the use of the roads (traffic regulation) • Police check empty houses
alert level: **DURING THE EVENT**				**PHASE IV**
During the eruption			Surveillance through remote system; defining the boundaries of the affected area inside the yellow zone.	• Defining boundary of the affected area inside the yellow zone • Yellow zone evacuation • Accomodation in hotels, hostels of Campania
alert level: **POST EVENT**				**PHASE V**
			Surveillance through remote system; installation of the monitoring system "in situ".	• Damage evaluation • Restoration of lifelines affected by the eruption • The people return to their homes

The table, which is part of the National Emergency plan, represents the importance of a strong interaction between the scientific community and civil protection actors in the decision-making process, in particular for the Red zone. As mentioned above, the Vesuvio Emergency plan establishes the evacuation before the eruption - at the alarm phase - of the population of the 25 municipalities of the red zone.

The key element is represented by the necessity to evacuate before the eruption. For this reason, a strong interaction between the scientific community and the civil protection in the decision making process is essential. The Italian Civil Protection Department is the entity responsible for making the decision to evacuate the population[35].

Prepare the population to evacuate

Public information management is not just dependent upon the issuance of a warning or an order to evacuate; it is also essential to raise public awareness and knowledge of what to do during an evacuation *prior to* the threat or impact of a hazard. This section should detail plans for ongoing awareness-raising, information dissemination and public educational programmes.

Key Considerations

Public information management, community education and awareness-raising are extremely important. Clear, credible, timely, and accurate information that is well-understood by the population is crucial to ensuring an efficient evacuation. Key messages should be prepared by authorities and informed by many considerations such as threat level (an alert of an impending severe weather system versus notification to evacuate), type of hazard, and timing.

Different methods need to be used to reach as wide an audience as possible, because any one method will reach only some of people some of the time. Such methods may include radio, television, SMS text messages, sirens, community groups, school notifications, social

35 Italian Department of Civil Protection (2013).

media, and other methods appropriate to specific contexts. It is also necessary to consider how to ensure that information is provided for hard-to-reach groups e.g. foreign nationals, refugees, disadvantaged communities and disabled persons. There are five key factors to bear in mind:

1. Multiple sources;
2. Repetition;
3. Timeliness;
4. Clarity of message;
5. Translation/Language options.

The role of media in disseminating information is vital and should be established in advance. Public awareness and educational programmes must also be supported by action and designed to encourage evacuation. Without practice drills and trainings during normal times, people fail to evacuate properly and in a timely manner[36]. All of these methods of preparing the public to evacuate help to reassure the public that emergency management and services are acting in response to the risks present, to reduce anxiety levels and to increase the likelihood that instructions will be followed.

In 2004, Cuba was hit hard by two hurricanes: Charley and Ivan. During hurricane Charley, about 250,000 people were evacuated and four people died. In comparison, no lives were lost during hurricane Ivan, when over 2 million people were evacuated. Cuba's success in responding effectively to disasters can be credited to governance and focus on community mobilization around preparedness. Not only does Cuba have a high-level meteorological institute, which issues warnings well in time, the country also has well-established procedures in place to prepare the population for mass evacuations in natural disasters. These include community risk mapping, annual updating of emergency plans, and a national simulation exercise. These three mechanisms contribute to training, trust-building and community commitment. Simulation exercises enable local governments to determine priorities and adjust goals. Participation and local leadership is built into the emergency response system. Disaster preparedness, prevention and response are also part of all school curricula, and children play an important role in spreading awareness among their family and neighbours[37].

36 The World Bank: Knowledge Note 2-6 Cluster2.
37 Cuban Civil Defense (2013); Thompson with Gaviria (2004).

Pre-identification of suitable shelter to be used in evacuations

4

This section should plan for the pre-identification of suitable accommodation for evacuees within the safety zone.

Key Considerations

Shelter provides for the temporary accommodation of evacuees. It provides protection from the elements as well as accommodates the basic personal needs which arise at an individual level during an emergency. Identification of appropriate shelter areas should be based on safety, availability of facilities, accessibility, capacity, and numbers of persons. Location will depend on the type and severity of the hazard, as well as potential secondary hazards. According to particular situations and contexts, new levels and types of risk may quickly emerge requiring evacuation to new areas due to secondary hazards such as fire following earthquakes, landslides following heavy rains, or damage to chemical and technological plants. Sites should be identified in the planning stages. Issues in the use of public facilities, such as schools, must be considered when identifying potential evacuation centres. This will include analyses of the potential negative impacts of the use of public facilities on host communities. The **Collective Centre Guidelines** is a helpful resource addressing these and other shelter-related issues[38].

Accommodation arrangements should take into account considerations such as:

- Many displaced persons prefer to remain as close to the home site as possible;
- Due to the fact that some individuals will have evacuated themselves and made their own arrangements (such as staying with family/friends or in a hotel), it may not be necessary to shelter the entire evacuated population;
- Disruption to work, school and social arrangements should be minimized;
- Accommodation should be located away from potential hazards or secondary hazards (such as a flood plain); structurally sound; follow existing building codes; of a suitable standard to cope with anticipated conditions (e.g. some types of accommodation will not be suitable for occupancy during winter). The Sphere Standards offer helpful guidance regarding well-tested, minimum standards for shelter and other services in a variety of settings[39].

38 Available online at www.globalcccmcluster.org/tools-and-guidance/publications/collective-centre-guidelines.
39 Available online at www.spherehandbook.org.

Protection recommendations relevant to pre-identification of shelter

- Identify and use smaller evacuation centres where possible, as self-regulation within smaller groups is more likely and solidarity may be fostered;
- Meet and discuss with host communities prior to identifying an evacuation centre in order to assess generally their attitude towards displaced populations, as well as the support they may need for hosting them;
- Conduct a technical/material assessment of identified evacuation centres to ensure that minimum physical safety requirements are fulfilled;
- Special shelter arrangements may be necessary for more vulnerable individuals in cases where basic shelter may not meet their needs. For example, it may be suitable to meet temporary accommodation needs in hotels or inns for older people and pregnant women, whereas specialized shelters may be necessary for those with particular medical issues, arriving from in-home care situations, or unaccompanied children, for whom children's homes or foster care may be more suitable[40].

Shelter of animals, livestock and pets

If animals, livestock and pets have been transported out of the evacuation zone, they will also need to be considered within plans for the provision of shelter, and suitable facilities for the sheltering or accommodation of animals must also be pre-identified.

Nepal has a very high risk of seismic activity and its capital, Kathmandu, is rated the most at-risk city in the country. With an estimated population of up to 3.5 million, and variable construction standards for infrastructure, a major earthquake is expected to have a very serious impact on the residents of the Kathmandu Valley and could leave up to 900,000 people displaced. To prepare for such an occurrence, the Ministry of Home Affairs in collaboration with IOM identified 83 open spaces in the Kathmandu Valley which could be used for humanitarian purposes in the event of a large-scale earthquake leading to massive displacement. These open spaces have been approved by the government and are now protected from further encroachment. The government, IOM, and humanitarian agencies have worked together in determining how these open spaces can be used for temporary settlement,

40 United Kingdom Cabinet Office (2014)

medical assistance, etc. The provision of adequate amounts of water poses the greatest challenge and requires further investigation. In addition to open spaces, the Ministry of Home Affairs and IOM have sought to locate assembly centres for the registration of IDPs. Schools were recommended for this purpose, and could potentially also provide emergency first aid and emergency shelter. IOM has also started to develop a post-disaster debris management plan for the valley. The Ministry of Home Affairs is working on identifying additional open spaces in Birgunj, Pokhara, Biratnagar and Nepalgunj[41].

Haiti faces difficulties in identifying sufficient and suitable evacuation shelter space to cater for the needs of all those who may require evacuation. In order to bridge this gap, different actors have been involved in some projects involving the construction of auditoriums and sport halls on school grounds which fulfil a double function. Besides serving their general purpose, these buildings can be used as evacuation centres when the need arises. The benefit of such construction projects is that they improve school infrastructure and avoid land tenure issues for the evacuation centres. The buildings are also likely to be well maintained in periods when they are not used as shelter space. These construction projects were undertaken in consultation with local civil protection actors, the mayor, and the Ministry of Education, who made recommendations for sites where such projects could be implemented.

As cluster coordinator for shelter and CCCM, IOM Haiti has also worked with the government on a master list of shelters countrywide. In Port-au-Prince, IOM, together with engineers from the Ministry of Public Works, revisited all the sites which according to a building database were listed as damaged during the 2010 earthquake in order to evaluate the structural soundness and appropriateness of these buildings as evacuation sites. The results were then crosschecked against the existing civil protection lists of shelters to enhance the accuracy of these lists. For areas outside the capital, lists of existing shelters were compiled and identified which ones were 'priority shelters' (those used most often or in the most high-risk areas) through consultation with local actors in workshops, which were held in the different provinces[42].

41 IOM & Government of Nepal Ministry of Home Affairs (2011).
42 IOM Haiti (2013).

4.1.2 DECISION TO EVACUATE

Authority and criteria to activate the plan

This section should outline the process for decision-making and identify activation points to determine when an evacuation would, or would not, be an appropriate response.

Key Considerations

There should be two parts to this section: '**Authority to Evacuate**', and '**Criteria for the Activation of the Plan**'.

The first element should establish the person or governmental body that has the authority to issue an evacuation order, and the executive process necessary for that decision to be made. The second element requires analysis of the hazard mapping and risk assessments. 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[43]. They are 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[44].

Many factors must be taken into consideration when deciding to order an evacuation, including:

- Vulnerability analysis;
- Time available for evacuation;
- Number of evacuees;
- Exit/evacuation routes;
- Safety;

43 Lindsay (2011)
44 Office of the United Nations Disaster Relief Coordinator (UNDRO) and United Nations Educational Scientific and Cultural Organization (1985)

- Resources;
- Environmental factors;
- Social factors;
- Night-time versus daytime evacuations.

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; and transparent to all partnering organizations.

Cuba's laws define a centralized decision-making structure during an emergency but also provide for decision-making by local authorities when circumstances require evacuation. By integrating centralized decision-making processes, which are key for emergency situations, with a decentralized, adaptable implementation process relying on local governance structures and community involvement, Cuba can efficiently respond to natural disasters.

When a hazard is imminent, the National Civil Defence puts the system of disaster response into motion. The High Command of the National Civil Defence takes up position in the national control centre for disasters to direct emergency measures. Under the direction of the National Civil Defence, the media keeps the population updated on the storms' progress and provides information about which measures need to be taken. Local leadership plays an essential role as Committees for the Defence of the Revolution, mass organizations, family doctors, and heads of institutions all review their responsibilities, updating lists of vulnerable community members, reviewing emergency plans, and checking evacuation procedures. The National Civil Defence centre in each province, municipality, and zone is the focus of all coordination and information for its respective area. If time permits, volunteers harvest crops and lead livestock to higher ground. The High Command of the National Civil Defence is in charge of ordering evacuations, which target the high-risk population first[45].

45 Cuban Civil Defense (2013); Thompson with Gaviria (2004).

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 an evacuation.

Key Considerations

Time is a crucial resource in deciding when to trigger an alert and carrying out an evacuation. Problems with advanced weather forecasts during the hurricane Katrina evacuations underscored the significance of timing an evacuation correctly. Issues of timing should be identified when conducting assessments of evacuation zones. The scientific community plays a vital role in disasters through their calculations, by providing advance notice which can inform decisions regarding how to time an evacuation, and can enhance the effectiveness of early warning messages. It is also important to consider timing in conjunction with the warning triggers set out in the Hazard Monitoring section above, as conditions that may prolong the time needed to evacuate (such as emergencies occurring at night) may indicate the need to trigger a warning earlier. Phased warning messages may be considered. Various timing model considerations can be found under the '**Understanding the Evacuation Zone**' section, above.

In Mozambique, the National Institute for Disaster Management and the National Civil Protection Unit coordinate directly with the National Water Department and the National Weather Service concerning water levels and weather forecasts to anticipate evacuation needs. All rivers in the country have been assigned alert levels at various stations, and dam water flow rates and capacity levels are similarly collated with river levels to anticipate flooding responses. When weather forecasts indicate that there is an increased risk of flooding, particularly due to rain in neighbouring countries that feed the Mozambican river basins, the alert level is raised to 'Orange' - Preparedness. During Orange Alert, local officials and local EWS committees are alerted and requested to prepare for possible evacuation measures. In 2013, noting that the nearby dam was at maximum capacity, and that the levees were not prepared to handle the river flow, the entire city of Chokwe was evacuated in a matter of 24 hours. In total, 70,000 people were evacuated to Chihaquelane, a government-assigned relocation zone[46].

46 IOM Mozambique (2013)

Transforming EWS data into public warnings

Once the decision to evacuate has been taken, it is necessary to inform the population of all relevant details of the situation and to give instructions about the actions that should be undertaken in order to evacuate from the hazard zone. This section should outline the form that evacuation warnings will take, and the methods that will be used for the dissemination and communication of the necessary information. It should establish who will decide to trigger a public warning, and at what point such a warning becomes necessary. This section should identify a technical agency or actor responsible for translating data into publicly understood messages. In addition, it is critical to include provisions for an operational, around-the-clock centre capable of translating and transmitting scientific information to the public as new developments emerge. This section should detail the coordination mechanisms in place with media and community outlets that may be required to assist in the transmission of public warnings.

Key Considerations

The public needs to be advised through official channels whether or not they are expected to be affected, to what extent, and what actions they should take.

Dissemination and Communication

Dissemination is the delivery of the warning messages, but communication is achieved only after the information is received and understood.[47] To be effective, early warning systems must be understandable, trusted by and relevant to the communities that they serve. IFRC Requirements for an effective EWS include:

- Establishing local networks that can both receive and act on warnings, and that raise

47 World Meteorological Organization (2010)

awareness and educate communities to take action to ensure their safety;
- Utilizing local networks to develop warning systems progressively so that they meet the needs of the communities and situations that they are designed for;
- Taking a multi-hazard approach to ensure sustainability by providing active alert, awareness and relevance.

Hard-to-reach groups

As with educating the population during the pre-response phase, ensuring the dissemination and communication of warning messages to hard-to-reach groups is an extremely important consideration. For example, people without a fixed residence are particularly vulnerable during an evacuation due to the lack of a single location where they can be contacted.

Methods of Warning

The appropriate methods for the dissemination of warnings should be identified during the planning process and procedures for the release of warning information should be decided. Different methods will suit different geographic regions and community groups. It should be ensured, insofar as possible within the time available, that these messages can be received and understood by persons with special communication needs[48]. Methods for disseminating official warnings include:

- Media releases (clarify the role of media in disseminating information in advance);
- Radio messages;
- Television announcements;
- Television news;
- Internet websites/social media networks;
- Email;
- Telephone;
- Text messages;
- Fax;
- CB radio;

48 Republic of Ireland (2006)

- Sirens;
- Public address systems (both static and vehicle mounted);
- Door knocking;
- Community groups.

A problem common to evacuations is under-response, when people ignore evacuation orders and remain in the hazard zone. However, in some disasters individuals leave an area without being told to do so, possibly when evacuation is not needed. Self-evacuation is in some cases an element of preparedness; a well-informed community, able to evacuate itself to pre-identified shelters and evacuation centres using previously established evacuation routes, can reduce casualties and help facilitate the evacuation process. Yet at times both under-response and self-evacuation can be caused by miscommunication or a lack of trust in the source of the warning, and can cause significant problems for authorities responding to a disaster.

It is therefore important to deliver clear and concise public warning messages, and to account for the characteristics of the receivers (e.g. language, age, education)[49] in order to minimize unintended outcomes.

Japan has invested in a highly innovative earthquake warning system, with more than 1,000 seismographs scattered across the country, which detect tremors and allow for brief advance warnings. During the 2011 Tōhoku earthquake, this highly advanced earthquake warning system was triggered for the first time, and likely saved many lives. The earthquake warning system detected the first, less harmful, shock wave indicating the earthquake and automatically issued alerts via television, internet, and cell phones before the second, destructive shock wave followed. Many energy and industrial facilities, utilities like gas lines, and transportation services shut down automatically. Residents of Tokyo had about 80 seconds of warning before the devastating quake arrived at the city. Whilst these unfiltered warnings issued through the earthquake warning system only provide a few seconds or minutes of warning, this can be life-saving[50].

49 Mitchell et al. (2007)
50 Knight, W. (2011)

In Nepal, the Department of Hydrology and Meteorology, local government, and several international and local NGOs in flood prone areas have collaborated to establish community-based flood early warning systems. The Department of Hydrology and Meteorology has installed EWS in 24 locations, which together with 74 telemetric stations for data acquisition and transfer, provide timely and life-saving information regarding floods. In addition, more than 200 hydrological stations and over 400 meteorological stations have been set up. If the level of water in a river rises to a critical level, sirens are automatically activated in the community and the respective District Administration Office and National Emergency Operation Centre. Through this unfiltered system, the community and the administration are simultaneously informed of the impending threat. Community level disaster management committees have been equipped and trained for warning dissemination, preparedness, and immediate response. This has proved to be a very effective mechanism to disseminate flood warnings and respond immediately to natural disasters[51].

51 Ministry of Home Affairs, Nepal (2013)

Security in evacuated zones

Provisions for the maintenance of security and prevention of unauthorized access to evacuated zones should be detailed in this section.

Key Considerations

The evacuated area could also be at risk from thieves and looters. Unless the danger to life is immediate and obvious, people will be reluctant to leave their homes without assurances that property will be guarded against burglary and looting during their absence. Adequate precautions must be taken to prevent the access of unauthorized persons to evacuated zones, and regular police patrols of the zones should be maintained as long as this does not endanger the lives of the police.

Transport and traffic control

This section should provide detailed plans, drawing upon information from the assessment of the evacuation zone, on how evacuees will be transported as quickly as possible to a place of safety following the threat or impact of a hazard.

Key Considerations

Transportation

There will be a number of people who do not have the ability or resources to make their own way out of the danger zone. Transport arrangements should be made for those with transport needs. To enhance transportation capacities in an emergency it is often beneficial to establish transportation networks prior to an emergency. In some cases, it may be better

if people do not use their own evacuation means due to the potential for traffic congestion. However, it is important to recognize that deterring evacuation using personal vehicles may be difficult, because it is often the method preferred by evacuees and would require significant resources to restrict.

Persons with transportation needs may form part of the following groups:

- Low income, do not own a vehicle;
- Visitors to the area without access to a vehicle;
- Language barriers;
- Physical or medical conditions affecting mobility (visually impaired, mental health, oxygen or other medical/mobility device dependent, etc.);
- Able-bodied individuals who own a vehicle but choose to not self-evacuate (based on fear or other reasons), and;
- Other able-bodied individuals who may not be able to self-evacuate.

The identification of available transportation resources and coordination of those limited resources is paramount to any evacuation's success. This could include the use of buses and mini-buses, trains, taxis and volunteer drivers, aircraft, helicopters and boats, as well as more traditional modes of transport such as donkeys and carts, depending on the circumstances and resources available.

Evacuation Route

Important characteristics and factors that should be considered when selecting an evacuation route include:

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

As some evacuation routes may become blocked in an emergency, it is also important to plan alternate routes or means of evacuation, in the event that preferred routes become inaccessible.

Traffic Control Measures

In any evacuation, arrangements should be made to keep traffic moving, at least along key routes. Traffic movements will be particularly difficult in very built-up urban areas, and also in rural areas with poor roads. Some 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; the use of traffic management techniques such as "contra-flow" (making the in-bound and out-bound lanes uni-directional), which have proven to be very effective. Making provisions, such as fuel, portable restrooms, and water, available along the route can also positively influence the effectiveness of an evacuation.

Transportation of animals, household pets, livestock

Evacuees will often seek to bring their animals with them, and many will ignore evacuation orders if forced to leave their pets or livestock behind. This may be especially true if evacuees rely on livestock for their livelihood or subsistence. As a result, special planning must be conducted for the transportation of animals out of the danger zone, when possible.

During the evacuation of New Orleans during Hurricane Katrina, data showed that more people were able to leave the city in a shorter time than had been thought possible. One of the problems with large-scale evacuations is that transportation infrastructure is not designed to accommodate evacuation-level demand. Because evacuations are inconvenient and disruptive, evacuees often delay travel decisions until the threat appears imminent, thus compressing enormous travel demand into short time periods. The highway evacuation plan used for Katrina evolved over a period of many years based on valuable lessons learned during previous disasters. Traffic modifications significantly improved the evacuation. A staged evacuation plan identified the order of evacuees, starting with the lowest lying areas, and suggested a time line for the initiation of contraflow (reversible) lanes. Traffic modifications helped to spread the demand to many highways and make maximum use of available roads in order to save lives[52].

52 Wolshon (2006)

4.1.5 EMERGENCY SHELTER AND RELIEF

Providing shelter

This section should outline the management structure for shelter provision and related services. Shelter must be managed within a structure that facilitates the coordination of agencies and services and support of emergency workers to fulfill their role. As the duration of sheltering can vary from hours to weeks, evacuee shelter requirements should be understood to ensure that the availability of shelter meets demand. It may also be important to account for differences in shelter availability based on what time of year a disaster occurs. For example, alternative shelter locations such as hotels may prove unavailable during peak tourist seasons.

Key Considerations

Facilities must meet basic human needs, and should provide for:

- Sanitation;
- Water;
- Nutrition;
- Electrical power and communications (insofar as possible);
- Storage;
- Medical support in the form of first aid and medical advice;
- Security.

As evacuated individuals can be diverse, it is important to plan shelter arrangements that meet specialized needs, particularly in cases where it may be inappropriate to house such individuals with the general evacuated population. Evacuees potentially in need of specified shelter arrangements may include:

- Nursing home residents;
- The physically disabled and other individuals requiring continual and/or comprehensive

medical support;
- Mentally ill;
- Prisoners and/or individuals with legal restrictive status, such as those with restraining orders against them.

Recognizing that people are often reluctant to leave their homes, and aiming to make efficient use of limited shelter space, Cuba's emergency plan offers several sheltering options during hurricanes. If a family house is certified as safe by the National Housing Institute and is not in danger of flooding, the family can remain in their home and take in neighbours from un-certified homes. If these options are exhausted, people are assigned to a designated group shelter facility and transport is provided. Community shelters are often schools or other municipal buildings. In the beginning of the warning phase, the shelters receive stocks of water, medicines, and other supplies. Different ministries and institutions collaborate closely in these shelters. Each shelter has its own governance structures with a director, deputy director, a doctor, a nurse, police, and a representative of the Cuban Red Cross present[53].

Due to recurrent natural disasters in Mozambique, particularly flooding, which often leads to short-term displacement, the Mozambican government has embarked on an ambitious mission to provide all at-risk families with relocation plots in safe zones. Although sometimes referred to as resettlement sites, the government does not require families to move permanently to these sites or give up their home land plot in the flood plains. Rather, families are encouraged to invest in their relocation plot and sign a waiver stating that they will not be able to sell the land allocated for relocation.

Although not all families in risk zones have received these relocation plots, the planned evacuation worked well in 2013, particularly in the districts of Chibuto and Xai Xai. Many families in these two districts already had high-ground plots with shelter. When floods waters rose in January 2013, these families self-evacuated to their high-ground plots, drastically reducing the number of families that required support in collective centres and camps. Xai Xai District had no collective centre as all at risk families were able to relocate themselves as the flood approached. Some families in Chibuto were cut off from their relocation plots and moved

53 Cuban Civil Defense (2013); Thompson with Gaviria (2004)

from collective centres to their home plots over the course of the first week.

The process is supported by local community EWSs through the National Institute for Disaster Management which has trained hundreds of local disaster management committees. Committees monitor water levels in the rivers, as well as radio broadcasts, and use flag systems to communicate with each other concerning the need to evacuate. In 2013, less than 50 people died when over 150,000 Mozambicans were displaced by flooding in Gaza Province. Seeing the results of these two districts, the government is continuing to assign plots to at-risk families in Gaza Province and working on a database system with IOM Mozambique to improve evacuation planning and relocation plot registration to ensure that all at-risk families have a safe zone for self-evacuation in the future[54].

Assistance provision and management

Evacuation centres, as well as providing for basic human needs, should also provide a greater range of welfare and support services. This will help facilitate the recovery process. The types of services required will differ between situations of short-term versus extended displacement. It is important to identify anticipated service requirements and offer guidance for their provision. Services provided by evacuation centres may include:

- Financial and immediate assistance;
- Counselling;
- First aid;
- Non-food items such as clothing, blankets and bedding;
- Information and referral services;
- Employment advice and livelihoods services;
- Interpretation services;
- Legal services;
- Assistance with family tracing.

In situations of both short- and long-term displacement, the services required to meet the basic welfare needs of evacuees will most likely require the involvement of several different actors. At this stage, it is often helpful to involve existing development agencies and actors

54 IOM Mozambique (2013)

in the management of services, not only because they frequently have experience in some longer-term assistance programmes such as livelihoods, but because they will likely play an integral role in the eventual transition from the mass evacuation phase of an emergency into long-term recovery (see the '**Recovery / Return**' section below). This is particularly important in situations of longer-term evacuations as full re-entry may take years to complete as the economy slowly recovers. To effectively manage the services outlined above, it is necessary to establish an assistance management structure that identifies service providers and coordinates services and ensures integrated, coherent response. This section should outline:

- Potential length of displacement resulting from the type and scale of hazard anticipated in the evacuation plan;
- Types of services necessary to support immediate needs;
- Types of services necessary to support mid-term needs;
- Types of services necessary to support the transition to solutions;
- Primary service providers for each type of service;
- Secondary service providers for each type of service in case the capabilities of the primary service providers are hindered as a result of the disaster;
- Where primary service goods will be stored and plans for accessing those goods;
- Where secondary service goods will be stored and plans for accessing those goods, in case the primary goods are lost or destroyed as a result of the disaster.

Information management at the evacuation centre

Registration and Profiling

Registration and profiling is the systematic collection of data to determine the size and characteristics of the evacuated population. The primary purpose is to identify disaster-affected individuals/families so that their needs can be met and their rights protected.

Public information

Set up mechanisms to inform in a timely manner all people in the evacuation centre about the disaster situation, relief activities and safe return to their homes. In the absence of accurate and clear information, rumours and speculation are likely to spread quickly, potentially leading to

uneasiness in evacuation centres or misinformed decisions by evacuees. It is highly important to establish public information messages and mechanisms detailing a wide range of relevant information including, weather updates, the current status of the emergency and subsequent developments, current conditions in locations of origin, damage sustained by property in the affected areas, and other points of concern. It is important to note that while media outlets typically provide information on activities, they will not have the same level of access as authorities and responders. In such situations the media is likely to engage in speculation of their own. It is necessary to ensure that official information provided by responders and authorities complement media coverage in order to avoid misleading conjecture.

Key Considerations

The potentially vast number of evacuation centres, their diversity, the availability or accessibility of basic services (water, health, etc.) and, above all, the characteristics and needs of evacuation centre residents must be considered when planning for the collection or dissemination of information. Any existing national and local privacy laws that may affect the nature of information collection and dissemination should be considered when developing information management plans. It is important for data collection processes to ensure that information regarding registration, needs assessments, morbidity and the movement of displaced persons is disaggregated by age and sex to allow for better understanding of and response to the needs of vulnerable persons.

Information to be collected[55]

- Number of evacuees
  - Number of registered/verified evacuees;
  - Number of estimated evacuees;
  - Number of evacuees in need of assistance.
- Location of evacuees
  - Region and municipalities with influx of evacuees;
  - Name and location of evacuation centres, including Global Positioning System (GPS) coordinates;
  - Original location of evacuees.

55 Adapted from UNHCR & IOM (2010)

- Basic profile
  - Age statistics;
  - Sex statistics;
  - Vulnerability (protection risk, with specific needs such as people with disabilities or people affected by chronic disease or older people, etc.) at the individual level for case management of those with specific needs;
  - Arrival date;
  - Assistance needs;
  - Accessibility of basic services (e.g. water, sanitation and health).

Safety and security in the evacuation centre

This section should include provisions for maintaining safety and security within and around evacuation centres.

Key Considerations

Typical safety and security responsibilities in and around evacuation centres include:

- Security assessments of evacuation and transportation sites[56];
- Maintaining general site security at designated evacuation locations[57];
- Screening evacuees for prohibited weapons[58];
- 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 basic provisions and services (e.g. water, food, shelter, basic health services).

56 U.S. Department of Homeland Security/Federal Emergency Management Agency (2008, p. 9)
57 Ibid.
58 Ibid.

Protection in the evacuation centre

This section should include provisions for the mitigation of protection risks that may arise in evacuation centres.

Key Considerations

Typical protection risks that may arise in evacuation centres include[59]:

- Gender-based violence;
- Abuse, neglect and exploitation of children;
- Obstacles in accessing personal documents including identification documents;
- Common crime and/or inadequate law enforcement;
- Limited access to livelihood activities;
- Conflicts among people staying in the evacuation centre and with host communities;
- Restrictions to freedom of movement and choice of residence for displaced persons;
- Limited participation in the management of the evacuation centre by certain groups;
- Discriminatory access to basic provisions and services (e.g. water, food, shelter, basic health services) particularly for persons with specific needs;
- Risk deriving from family separation, particularly for children, older persons, persons with disabilities and other individuals who rely on family support for their survival.

Protection recommendations to include in an evacuation plan in order to mitigate the risks outlined above:

Host Community Relations

Ensure that a formal link exists between the representatives of people hosted in the evacuation centre, local community representatives, relevant responders, and local and national authorities.

59 IASC (2011)

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 and provide timely psycho-social support for persons suffering from distress in order to prevent negative coping mechanisms, including increases in domestic violence, drug abuse, etc.

Gender-based Violence (GBV)

Safe and appropriate structures and mechanisms for reporting, responding and preventing GBV need to be instituted in each evacuation centre. Assistance should be provided for survivors of GBV, prevention activities must be put in place, and effective action to prevent and respond to GBV must be incorporated into all stages of the identification and management of evacuation centres.

Family Reunification

Involuntary separation of family members frequently occurs during natural or human-made disasters. Existing evacuation guidelines call for a standardized, interoperable evacuee tracking and family reunification system that ensures the safety and well-being of children. There is general consensus that reunification of dispersed families should be encouraged and facilitated as much as possible in situations of humanitarian crisis and relevant actors should maximize their efficiency in carrying out tracing work and family reunification by strengthening their tracing and social welfare activities.[60]

Vulnerable persons

- Generally, the identification and management of evacuation centres should take into consideration the presence of groups with specific needs and ensure their safe and dignified access to the evacuation centre, its facilities and services;
- A targeted response to ensure that appropriate assistance and protection is provided to meet the specific needs of identified vulnerable individuals/groups. This may be through community-based activities or individual referrals.

60 Adapted from ICRC (1995)

Accountability to the affected population

Complaints procedures should:

- Include a standard complaints form (but review all complaints received, regardless of the format);
- Include ways of lodging a complaint anonymously;
- Include ways of lodging a complaint verbally (for people who are illiterate);
- Give people submitting a complaint the opportunity to identify themselves whilst respecting their anonymity, should they fear retaliation;
- Include ways to submit complaints through a staff member other than the one about whom the complaint is made;
- Incorporate an appropriate and effective follow-up process.

A referral mechanism is not a rigid structure but a dynamic and inclusive process, which should incorporate:

- Guidance on how to identify and appropriately treat vulnerable individuals while respecting their rights and giving them power over decisions that affect their lives;
- A system to refer vulnerable individuals to specialized agencies offering protection from physical and psychological harm, as well as support services such as medical assistance, rehabilitation support, access to prosthetic and other devices for people with disabilities, social and psychological support, legal services etc.

4.1.6 TOWARD SOLUTIONS

Return and alternative solutions

The specific needs and vulnerabilities of evacuees do not automatically disappear once a disaster ends. Rather, the displaced frequently face continuing challenges, and need ongoing support until they return home or achieve an alternative solution.

As mentioned in the 'Legal Considerations' section, everyone has a right to voluntary return in safety and dignity. In mass evacuation situations, return is often the primary, preferred solution, and is a vital stage of the evacuation process. In addition to removing people from a hazardous area, successful evacuation plans should address strategies for returning residents when it is safe for the area to be inhabited again. However, depending on the damage caused by a disaster, there may not be a safe location to which to return. In such cases, alternative solutions such as local integration or relocation should be explored.

It is not the function of a mass evacuation plan to detail provisions for supporting the displaced throughout the process of securing solutions. However, it is important to identify appropriate strategies for transitioning into the solutions stage, and to identify appropriate actors to whom the longer-term recovery process can be handed over. Mass evacuation plans cover only the first stage of a much larger response to disasters, so they cannot be considered in isolation from other stages. Following an evacuation, the much longer road to recovery is just beginning: the mass evacuation stage needs to be concluded and handed over to recovery actors in a manner that does not put evacuees at further risk, and lays a strong foundation for transitional activities.

This section should detail which indicators may be used to assess the appropriateness of return, integration or relocation elsewhere; the process for activating return or alternative solutions; who is responsible for deciding to activate these processes; how to identify whom amongst the evacuees should be prioritized for return or alternative solutions; and other factors integral to concluding the evacuation phase of an emergency.

This section should also outline a plan to turn responsibility for alternative solutions over to relevant actors. It is often the case that these phases are not dealt with by those responsible for the emergency response phase.

Key Considerations

It is necessary to assess the disaster area to determine whether or not return is possible, to identify any special conditions which may need to be imposed, and if return is not possible, to identify alternative solutions for the medium- and long-term. Issues in physical return such as transport, the need for staged return, and traffic management must also be considered. Once the hazard which necessitated the evacuation no longer poses a threat, the potential for return to the evacuated area can be explored. The decision to implement a process of return must be considered on two grounds: an objective assessment of the affected area; and the consideration of compelling reasons in the case of an individual that may prevent his or her return to an evacuated area.

Objective assessment of the evacuated site

This should entail an objective and comprehensive assessment of the affected area undertaken by competent authorities in order to ensure: (1) that the hazard that gave rise to the evacuation no longer poses a threat or has been diminished to the extent that it can be reasonably considered safe to return, and; (2) that conditions in the affected area post-disaster are acceptable for the returning population. This will require investigation into, among other factors:

- Infrastructure and building safety;
- Restoration of lifeline utilities (e.g. water, sanitation, electrical power, etc.);
- Availability of local accommodation (particularly if many homes are uninhabitable);
- General security.

Issues in return and relocation

Transportation either back to the location of origin or to a relocation point elsewhere will need to be arranged in order to safely and effectively conclude an evacuation.

In addition, 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. For more information on these and other legal considerations, please consult **Section 2.1** above.

Transferring responsibility to recovery actors

As indicated in the '**Assistance Provision and Management**' section above, it is useful to involve development and other recovery actors in the provision of services when evacuees first begin to occupy evacuation centres. By doing so, evacuation actors can begin to work with those who will manage the eventual recovery process early on, in order to ease the transition into recovery. Such working relationships are especially effective in dealing with joint projects on issues such as obstacles to return. For example, a primary obstacle to returning home after an evacuation due to a disaster is the lack of support in re-establishing shelter. In many cases, relief efforts provide basic shelter materials and local people contribute labour. This can be a problem for persons with disabilities and older persons living alone who are unable to rebuild themselves but who are reluctant or unable to call upon community members to assist them. By establishing structures in which relevant registration information on evacuees can be safely and appropriately shared with the recovery actors managing such reconstruction projects, mass evacuation actors can help to contribute to solutions by promoting the safe and dignified return of evacuees. This is only one example of ways in which evacuation actors can coordinate their plans for return, local integration, or relocation with recovery actors, in order to enhance the appropriate and safe transition of evacuees to securing solutions.

It is essential to identify and detail with which development and recovery agencies / actors transitional activities should be coordinated, and what mechanisms and communication structures should be followed to ensure such coordination.

- Who will be responsible for managing long-term shelter programmes for evacuees, livelihood options, and other programmes seeking to support solutions?
- What communication and coordination structures should exist between different recovery sectors and evacuation agencies?
- What programmes need to be jointly managed between evacuation and recovery actors, and at what point should full responsibility be handed over to those managing the recovery process?
- Who is responsible for deciding when to close evacuation centers, and what standards need to be met to ensure that such closure will not contravene the safety and dignity of evacuees?

4.2 RESPONSIBILITIES

This section should outline who does what during each phase of an evacuation, other emergency plans, level of administrative organization (national, regional, local, etc.) and the way in which national, regional, and local efforts will be integrated during evacuation. All agencies involved in the evacuation should have their roles and responsibilities clearly stated in this section of the plan, including external stakeholders such as media representatives and their role in information dissemination.

4.2.1 PRE-RESPONSE

Coordinating Agency	Functions

Cooperating Entity	Functions

4.2.2 DECISION TO EVACUATE

Coordinating Agency	Functions

Cooperating Entity	Functions

4.2.3 WARNING

Coordinating Agency	Functions

Cooperating Entity	Functions

4.2.4 EVACUATION

Coordinating Agency	Functions

Cooperating Entity	Functions

4.2.5 EMERGENCY SHELTER AND RELIEF

Coordinating Agency	Functions

Cooperating Entity	Functions

4.2.6 RECOVERY THROUGH RETURN, INTEGRATION OR RELOCATION

Coordinating Agency	Functions

Cooperating Entity	Functions

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iDMC internal displacement monitoring centre